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Guidance for the Reregistration of Pesticide Products Containing Carbophenothion as the Active Ingredient

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GUIDANCE FOR THE REREGISTRATION OF MANUFACTURING-USE AND CERTAIN END-USE PESTICIDE PRODUCTS

CONTAINING

CARBOPHENOTHION
(058102)

May 1984

ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDE PROGRAMS

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INTRODUCTION

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA Section 3(g), as amended in 1978, directs EPA to reregister all pesticides as expeditiously as possible. Each registrant of a manufacturing use product of the active ingredient who wishes to continue to sell or distribute that product must apply for reregistration.

To fulfill this Congressional mandate, we have established the Registration Standards program which will review all pesticide active ingredients first registered before January 1, 1977. These pesticides will be reviewed in use clusters which are prioritized on the basis of a ranking scheme giving preference to pesticides used on food and feed crops.

The Registration Standards program involves a thorough review of the scientific data base underlying pesticide registrations and an identification of essential but missing studies which may not have been required when the product was initially registered or studies that are now considered insufficient. Our reassessment results in the development of a regulatory position, contained in this document, on each pesticide and its uses. The regulatory position may require the registrant to modify product labels to provide additional precautionary statements, restrict the use of the pesticide to certified applicators, provide reentry intervals, modify uses or formulation types, specify certain packaging limitations, or other requirements to assure that proper use of the pesticide poses no potential adverse effects to human health or the environment.

The scientific review, which is not contained herein but is available upon request, concentrates on the technical grade of the active ingredient and identifies missing generic data. However, during the review of these data we are also looking for potential hazards that may be associated with the formulated (end-use) products that contain the active ingredient. If we find serious concerns, we will bring formulated products under the provisions of the Registration Standards program to the extent necessary to protect the public.

EPA has the authority under FIFRA §3(c)(2)(B) to require that certain registrants submit generic data that will answer our questions regarding the hazard that may result from the intended use of the pesticide under review. Further, §3(c)(2)(B) provides that these data are to be submitted by those registrants who do not qualify for the formulator's exemption [FIFRA §3(c)(2)(D)]. Normally, this means that the registrants who are responsible for filling the data gaps are the manufacturing-use product producers (basic suppliers of the active ingredient). However, end-use producers will not qualify for the formulator's exemption if the source of their active ingredient: (1) is not registered with EPA, and/or (2) is produced by the registrant's firm, or a firm which has ownership in common with the registrant's firm. These end-use producers can qualify for the formulator's exemption if they change their source of supply to a registered source, provided the source does not share ownership in common with the registrant's firm. If the end-use product registrant decides to switch sources, a new Confidential Statement of Formula, EPA Form 8570-4, must be submitted to the appropriate Product Manager within 90 days of receipt of this Guidance Document. The chart on the following page shows what is generally required of those who do and do not qualify for the formulator's exemption in the Registration Standards program.

If you decide to request the Agency to discontinue the registration of any of your products subject to the reregistration requirements of this Guidance Document, please notify the Product Manager named in the cover letter, within 90 days from the receipt of this document, that you wish to voluntarily cancel the registration(s). If you decide to maintain your product registration(s), you must provide the information described in the following pages within the time-frames outlined. EPA will issue a notice of intent to cancel or suspend the registration of any currently registered product if you fail to comply with the requirements set forth in this Guidance Document.

This Guidance Document will be supplemented by EPA with additional information about compliance with data support requirements. In Monsanto v. Administrator, EPA was recently enjoined from implementing in any way the "mandatory data licensing" aspects of §3(c)(1)(D) of FIFRA. EPA is assessing the implications of the injunction for the reregistration process. Because this situation is currently unresolved, EPA has decided to proceed with the requirements in this Guidance Document which do not relate to compliance with the §3(c)(1)(D) provisions and to supplement the Document with additional guidance when circumstances permit. Failure to comply with the provisions of the subsequent guidance will also result in issuance by EPA of an intent to cancel the affected product registration(s).

Registrants are reminded that §6(a)(2) of FIFRA requires you at any time to submit factual information raising concerns of possible unreasonable adverse effects of a pesticide. You should notify the Agency of interim results of studies in progress if those results show possible unreasonable adverse effects.

PRODUCTS SUBJECT TO THE REGISTRATION STANDARDS PROGRAM	ACTION(S) REQUIRED TO MAINTAIN REGISTRATION
I. Products That Do Not Qualify For The Formulator's Exemption	
A. Single Active Ingredient Products*	These products must be reregistered. To obtain reregistration, labeling, packaging and data requirements must be satisfied in accordance with the Registration Standards Guidance Document.
B. Multiple Active Ingredient Products	These products will not be reregistered at this time. However, generic data required to continue the registration of the active ingredient under review, as described in the Registration Standards Guidance Document, will be required and some labeling precautions may also be required.
II. Products That Do Qualify For The Formulator's Exemption	Only when additional restrictions or labeling are needed to protect man or the environment will these products be subject to the Registration Standard requirements. Affected products will be dealt with in a variety of ways, including but not limited to the Label Improvement Program and special intent to cancel notices.

* End-use products of registrants who also produce a manufacturing-use product will not be required to be reregistered provided that registrant fulfills the requirements specified in the Guidance Document for manufacturing-use product(s). Such end-use products will be subject to the labeling changes required for products in "II" above. If there are no manufacturing-use products registered by any company end-use products will be required to be reregistered.

NOTE: If all registrants in "I" above fail to meet the requirements in I-A and B above, then the registrants in "II" lose their right to qualify for the formulator's exemption and become subject to the requirements in I-A and B.

IV. REGULATORY POSITION AND RATIONALE

A. INTRODUCTION

This Guidance Document describes the Agency's regulatory position on registered manufacturing-use products (MPs) containing the insecticide carbophenothion. This Guidance Document also addresses certain labeling requirements for end-use products. This position is based on a consideration of all accepted uses of pesticide products containing carbophenothion as the sole active ingredient, under sections 3 and 24(c) of the FIFRA. Other considerations include the known chemical, environmental, and toxicological characteristics of this pesticide and the established tolerances for residues in or on food and feed commodities. From these considerations the Agency sets forth the data and labeling requirements that must be met by registrants and applicants of carbophenothion products in order for a product to be registered or reregistered under this Document. Only those registration and labeling requirements for current and future substantially similar MPs and EP's are addressed here. Future products that differ appreciably from those described in this Document may require that amendments be made to this Document to reflect the differences.

B. CHEMICAL DESCRIPTION AND USE PROFILE

Carbophenothion is the acceptable common name for the insecticide S-[[(p-chlorophenyl)thio]methyl] O,O-diethyl phosphorodithioate as determined by the American National Standards

Institute (ANSI). The Chemical Abstracts Registry (CAS) number is 786-19-6, and the EPA Chemical Reference Number is 058102. Stauffer Chemical Company is the sole producer of carbophenothion in the United States and markets its products under the trade name Trithion®.

Technical carbophenothion is a yellow-brown liquid with a mild mercaptan-like odor. The empirical formula is $C_{11}H_{16}ClO_2PS_3$ and the molecular weight is 342.9. Physical and chemical properties of technical carbophenothion are: vapor pressure 0.008 u at 25°C; solubility in water 0.34 ppm at 20°C; specific gravity 1.274 at 20°C; pH 2.43; and boiling point 82°C at 0.01 mmHg. Carbophenothion is miscible with most organic solvents such as petroleum ether, benzene, toluene, xylene, ethers, alcohol and ketones. [GS0108092, GS0108093, GS0108094]

There are three federally EPA registered manufacturing-use products and thirty federally registered end-use products containing carbophenothion as the sole active ingredient. In addition, there are thirty-two EPA registered multiple-active ingredient products containing carbophenothion in combination with azinphos-methyl, captan, carbaryl, difocol, endolsulfan, sulfur and thiram. There are only two Section 24(c) "Special Local Need" registrations.

Carbophenothion is an organophosphorus acaricide and insecticide registered for use on a wide variety of vegetable, fruit, nut, forage, ornamental, and forestry sites. The majority of pesticide use in this country is on citrus. Carbophenothion is commercially available as dust, granular, pelleted, wettable powder, and emulsifiable concentrate formulations. Most products are applied as foliar applications using either ground or aerial equipment. Dormant and delayed dormant applications are made to some fruit and nut trees. There are also limited uses as a seed treatment, dip, and soil insecticide. Most agricultural product labels specify that use should be only by trained personnel, using proper protective equipment.

C. REGULATORY POSITION

Based on a review and evaluation of all available data and other relevant information on carbophenothion, the Agency has made the following determinations:

1. The Agency has identified concerns over the potential adverse effects of carbophenothion to aquatic and terrestrial species. Based on acceptable aquatic acute toxicity studies, it is calculated that the expected concentration of carbophenothion following direct application to a 6-inch layer of water exceed 1/2 the acute toxicity level in aquatic species. Based on a scientifically sound subacute dietary study, it is calculated that the expected residues in avian foodstuffs following a single application of carbophenothion at a rate of 1 pound a.i. per acre exceed 1/5 the subacute dietary toxicity in avian species. In addition, although there is insufficient information on the granular formulations, the Agency expects that granular applications of carbophenothion would have an adverse impact on birds.

A total risk assessment cannot be made until gaps in the data base for terrestrial species and environmental fate are filled. After the Agency has evaluated these data, it will determine whether EPA should initiate a public interim review process by placing the chemical in Special Review. If instead, regulation of the chemical through the normal registration process is found to be appropriate, the Agency will update its regulatory position and rationale to reflect this conclusion and the reasoning behind it. In the interim, precautionary label statements listed in Section G of this document are required to reduce the hazards.

2. The Agency is unable to complete a full tolerance reassessment of carbophenothion because of extensive residue chemistry and toxicology data gaps. Future requests for tolerances will not be automatically rejected, but will be considered on a case-by-case basis.

3. California has established reentry intervals for carbophenothion of 14 days for citrus, peaches, nectarines, and grapes; and 2 days for all the other crops. A federal reentry interval of 2 days for carbophenothion has been established for all crops under 40 CFR 170. The Agency will continue to require a reentry interval of 2 days for crop uses of carbophenothion pending the receipt and evaluation of reentry data. The Agency is also requiring an interim 24 hour reentry interval for the outdoor domestic use on lawns and ornamentals.

4. The Agency has determined that all end-use products contain-

ing carbophenothion warrant restricted use. Registrants will have the option of accepting the restricted-use classification, or submitting data as specified in Table C. PRODUCT SPECIFIC DATA REQUIREMENTS FOR END-USE PRODUCTS.

5. Additional label precautions that must be included on the labeling for carbophenothion products have been identified. These precautions can be found in Section G of this Document.
6. Manufacturing-use pesticide products containing carbophenothion as a sole active ingredient may be registered for sale, distribution, reformulation, and use, subject to the terms and conditions specified in this Guidance Document.
7. Registrants must provide or agree to develop additional data, as specified in the tables, in order to maintain existing registrations and to permit new registrations.

D. REGULATORY RATIONALE

The Agency has determined that it should continue to allow the registration of carbophenothion after considering the following:

1. Adequate studies are unavailable to assess the acute toxicological effects of carbophenothion to humans. Preliminary data indicate that carbophenothion is in Toxicity Category I on the basis of acute oral and dermal effects [00089847, GS010097]. Once data gaps are filled,

precautionary label statement requirements associated with assigned toxicity categories for acute toxicity (oral, dermal, inhalation, and irritant effects) should minimize the acute hazards associated with these routes of exposure. Carbophenothion is not adequately tested for chronic toxicity, oncogenicity or teratology.

2. Based on studies available to assess hazards to terrestrial and aquatic organisms, carbophenothion is characterized as very highly toxic to freshwater and marine /estuarine organisms and highly toxic to upland gamebirds. Label precautions required by this Guidance Document should reduce the hazard to terrestrial and aquatic organisms. Once data gaps are filled, additional labeling precautions may be required. Independent of the Registration Standards process, groups of chemicals are being reviewed by EPA and the Office of Endangered Species for possible impacts on endangered species. Carbophenothion is being reviewed along with other pesticides used on corn, cotton, soybean, and sorghum as part of this cluster approach. Additional label requirements may be imposed as a result of this review.

3. Available data are insufficient to assess the environmental fate of carbophenothion or to assess the potential exposure of humans and non-target organisms to carbophenothion. Preliminary data indicate that carbophenothion is relatively immobile in sandy loam soils. However, the Agency cannot assess the potential for carbophenothion to contaminate groundwater until leaching data are submitted. Preliminary data indicate that there may be a potential for carbophenothion

to accumulate in spot and juvenile sheepshead minnows. Once the additional studies requested in Table A of this Guidance Document are filled, an environmental fate assessment can be made.

4. Based on residue chemistry and toxicology considerations, there is no evidence to suggest that current tolerances are likely to expose the public to unreasonable adverse effects.

5. Because carbophenothion is a very acutely toxic pesticide, and until data are submitted to evaluate the hazards of worker exposure to treated crops, the Agency is requiring a 48 hour crop reentry interval to appear on the labeling of all end-use agricultural products.

   The Agency is also concerned about the outdoor domestic use on lawns, and the outdoor domestic use on ornamentals by professional applicators, since there is a possibility of post-application exposure to individuals and pets from these uses. However, the amount of exposure cannot be determined because of numerous data gaps. Since dermal, eye, and inhalation exposure from both the granular and emulsifiable concentrate formulations can occur to applicators and residents, the Agency is requiring an interim 24 hour reentry interval until data are submitted to enable the Agency to evaluate the hazards from these uses.

6. The Pesticide Incident Monitoring System (PIMS) reports covering the period from 1966 to January 1980 include 11 incidents involving the pesticide carbophenothion.

The human and domestic adverse effects reported in these incidents were the result of improper handling and ingestion of carbophenothion or food contaminated with carbophenothion.

7. Until recently, classification decisions for previously registered products have been made through regulation. The Agency has stated that its preferred method for classification is through the reregistration procedure. Consideration of classification during the reregistration process enables the Agency to thoroughly evaluate the risks/benefits of a restricted use classification and is a more efficient use of Agency resources.

Classification considerations are based on the toxicity categories in §162.11(c). The principal human effects triggers for pesticides used in non-domestic settings are the Toxicicity I criteria, i.e. acute dermal toxicity 200 mg/kg or less; acute inhalation toxicity 0.2 mg/l or less and acute oral toxicity 50 mg/kg or less. The principal human effects triggers for pesticides in the domestic settings are the Toxicity II criteria. Following the identification of candidates based on these criteria, §162.11(c) calls for an evaluation of label adequacy. If certain subjective criteria are met that indicate current label language or new label language could be developed to prevent unreasonable adverse effects, then the formulation/use in question could be classified general use. An evaluation of other information such as human toxicological data, accident data, or monitoring data is also required under §162.11(c). The acute toxicology data base for carbophenothion end-use products is severely lacking. Current carbophenothion product labels carry Toxicity Category I, II, and III designations. Technical carbophenothion is in Toxicity Category I on the basis of an acute dermal toxicity of 27 mg/kg to female rats and 54 mg/kg to male rats [GS010097]. Simple extrapolation of these data for the female rats without taking into account the effects of the other ingredients in the end-use products indicates that non-domestic products containing greater than 13% carbophenothion would fall in Toxicity Category I and domestic products containing greater than 1.3% carbophenothion would fall in Toxicity Category II on the basis of acute dermal toxicity. These products would be candidates for restricted-use.

If the acute toxicity data base for end-use products were more complete, the Agency would be in a position to determine which formulations warrant the restricted-use classification. Unfortunately, this is not the case. Therefore, the Agency has decided to be conservative and require that all products be classified as restricted-use unless appropriate toxicity studies and other information is presented to show otherwise.

8. Under FIFRA the Agency cannot cancel or withhold registration simply because data are missing or inadequate (see Sections 3(c)(2)(B) and 3(c)(7) of the FIFRA). Rather, issuance of

this Standard provides a mechanism for identifying data needs. These data will be reviewed and evaluated when they are received and the Agency will determine at that time whether they will affect the registration(s) of carbophenothion.

E. CRITERIA FOR PRODUCTS SUBJECT TO THE GUIDANCE DOCUMENT

This Guidance Document covers products that contain carbophenothion as the sole ingredient and the chart in the Introduction describes the extent to which such products are subject to this Guidance Document. Applicants for registration or reregistration of such products must comply with all terms and conditions described herein. This includes making a commitment to fill data gaps on a schedule specified by the Agency. Also, applicants for reregistration must follow the instructions contained in this Guidance Document and complete and submit the appropriate forms within the specified times. End-use products must be in compliance with the label changes specified in this Document.

F. ACCEPTABLE RANGES AND LIMITS

1. Product Composition Statements

To be covered under this Guidance Document, manufacturing-use products must contain carbophenothion as the sole active ingredient. Each MP formulation proposed for registration or reregistration must be fully described with an appropriate certification of limits.

2. Acute Toxicity Limits

The Agency will consider for registration any MP whose acute toxicity category (I, II, III, IV) is supported by adequate acute toxicology data and appropriate precautionary statements in the labeling.

G. REQUIRED LABELING

All manufacturing-use products containing carbophenothion must bear appropriate labeling as specified in 40 CFR 162.10. More specific requirements are as follows:

1. Label Requirements for Manufacturing-Use Products

a. Ingredient Statement

The ingredient statement for MPs must list the active ingredient as:

Carbophenothion, (S-[[(p-chlorophenyl)thio]methyl] O,O-diethyl phosphorodithioate)............___%.

b. Use Pattern Statement

All MPs must state that they are intended only for formulation into end-use products for any of the use patterns listed below. A limiting factor will be the data that support each use pattern. No use may be included on the label where the registrant fails to agree to comply with the data requirements in either TABLE A or TABLE B for that use pattern.

- Terrestrial, non-domestic, food uses on: alfalfa; alfalfa (seed crop); almond; apricot; apple; beans, dried-type (dry shelled beans); beans, dried type (seed crop); beans, succulent (lima)(seed crop); beans, succulent (snap)(seed crop); beets (seed crop); blueberries (lowbush); cantaloupe; cantaloupe (seed crop); cherry; clover; clover (seed crop); corn, field; corn, sweet; corn, field (seed crop); corn, sweet (seed crop); cotton; crab-apple; cucumber; cucumber (seed crop); eggplant; eggplant (seed crop); fig; grapefruit; grape; lemon; lime; nectarine; olive; onion, dry; onion, green; onion dry (seed crop); onion, green (seed crop); orange; pear; pepper; pepper (seed crop); pimento; pimento (seed crop); peach; peas, succulent; peas, succulent (seed crop); pecan; plum; prune; quince; sorghum; sorghum (seed crop); soybean, edible (seed crop); soybean, edible; spinach; spinach (seed crop); squash, summer; squash, summer (seed crop); strawberry; sugar beets; sugar beet (seed crop); tea (dried); tomato; tomato (seed crop); tangelo; tangerine; tomato; walnut; watermelon; watermelon (seed crop).

- Terrestrial, non-domestic, non-food uses on: lawns and turf (including ground covers); Christmas tree plantings; forest trees; ornamental plants (herbaceous, woody shrubs, trees and vines).
- Terrestrial, domestic, non-food use on: lawns

The attached Index Entry summarizes all currently acceptable uses for single active ingredient products containing carbophenothion, including sites of application, target pests, dosage rates, restrictions and limitations, and the method and frequency of application.

b. Precautionary Statements

Labels for all MP products containing carbophenothion must bear statements reflecting the hazards to man and the environment [40 CFR 162.10].

- Based on data reviewed by the Agency, the environmental hazard statement below is required to appear on all MP products containing carbophenothion:

  This pesticide is toxic to freshwater and estuarine fish and invertebrates. Do not discharge into lakes, streams, ponds, or public waters unless in accordance with an NPDES permit. For guidance contact your Regional Office of the EPA.

2. Label Requirements for End-Use Products

a. Ingredient Statement

The ingredient statement for EP's must list the active ingredient as:

Carbophenothion, (S-[[(p-chlorophenyl)thio]methyl] O,O-diethyl phosphorodithioate)............___%.

b. Precautionary Statements

Labels for all EP's containing carbophenothion must bear statements reflecting the hazard to man and the environment. Specific label requirements are listed below:

° In the absence of crop rotation data, the crop rotation restriction below must be placed on all EP's which may be used in a situation where rotation with crops used for food or feed that are not registered with carbophenothion may occur:

Do not rotate with any crop used for food or feed which is not registered for use with carbophenothion.

° Based on data reviewed by the Agency, the following environmental hazard statement is required to appear on all EP's:

This pesticide is toxic to freshwater and estuarine fish and invertebrates. Do not apply directly to water or wetlands. Drift and runoff from treated areas may be hazardous to fish and invertebrates in adjacent aquatic sites. Do not contaminate water by cleaning of equipment or disposal of wastes. Cover or incorporate spills.

° To avoid the possible misuse of carbophenothion in greenhouses, which is not a registered site for this chemical, the phytotoxicity caution currently appearing on registered labels must be reworded to read:

A few ornamentals, including some crassulaceae, certain ferns, and a few very sensitive rose varieties, have been injured. [Delete reference to greenhouse rose varieties]

° All products must add the restricted use statement:

RESTRICTED USE PESTICIDE

For retail sale to and use only by Certified Applicators or persons under their direct supervision, and only for those uses covered by the Certified Applicator's certification.

(Registrants have the option of revising the label to reflect a restricted-use classification, or submitting data. See under TABLE C.)

- The worker protection statments below must appear on all products intended for non-domestic use, if they do not already appear on the labeling:

  Wear rubber gloves, protective clothing, rubber overshoes and goggles.

  Wear a respirator jointly approved by the Mining Enforcement and Safety Administration (formerly U.S. Bureau of Mines) and the National Institute of Occupational Safety and Health under the provisions of 30 CFR Part II."

- The worker protection statment below must appear on all products intended for domestic use:

  Wear protective clothing, including gloves and shoes, when handling or applying.

- The reentry statements below must appear on all carbophenothion labels with directions for use on crops:

  Do not reenter treated fields within 48 hours unless protective clothing is worn.

- All products with domestic outdoor usage on home lawns and ornamentals must contain the statement(s) below:

  Water material into soil immediately after application. Do not enter treated areas or allow children and pets on lawn for 24 hours and until grass has completely dried.

  Do not contact treated ornamentals for 24 hours following treatment.

Refer to PR Notice 83-2 for additional information on reentry and worker protection labeling requirements.

H. TOLERANCE REASSESSMENT

The tolerances for combined residues of carbophenothion and its cholinesterase-inhibiting metabolites are published in 40 CFR 180.156. A summary of these tolerances is presented in Table 1.

Tolerances for numerous raw agricultural commodities as well as processed products are not supported by available data.

Additional data are required to support the tolerances for carbophenothion residues in or on the following commodities:

> alfalfa (fresh and hay); almond hulls; apples; apricots; bean straw; cantaloups; cherries; clover (fresh and hay); corn (sweet); corn forage; cottonseed, crabapples, dried citrus pulp and meal (21 FR 561.70), eggplant,
>
> figs; garden beet roots and tops; grapefruit; grapes; lemons; lima beans (succulent); limes; nectarines; olives; onions (green and dry bulb); oranges; peaches; pears; pecans; peppers; pimentos; plums (fresh prunes); quince; snap beans; sorghum forage and grain; spinach; strawberries; sugar beet roots and tops; summer squash; tangerines; tea (dried; 21 CFR 193.50); tomatoes; walnuts; and watermelons.

Residue data and tolerance proposals must be submitted for the following raw agricultural commodities for which tolerances are not currently established:

> alfalfa seed; bean vines; corn grain; corn fodder and silage; sorghum fodder and silage; eggs; and poultry (fat, meat, and meat by-products).

No new crop groupings can be established at this time because of extensive residue chemistry data gaps. Compatibility between Codex MRL's and U.S. tolerances will be assessed when data gaps specified in Table A have been submitted and evaluated.

Changes to 40 CFR 180.156 are indicated as follows:

- 40 CFR 180.156 will be amended to read soybeans *per se* from soybeans (succulent form), since succulent soybeans are rarely consumed.
- 40 CFR 180.156 will be amended to include a tolerance for 0.1 in the meat of horses.
- 40 CFR 180.156 will be amended to change the tolerance for milk from zero to 0.01 ppm.

In order to maintain the use of carbophenothion on feed crops and peas, The registrant must petition the Agency to establish the following tolerances:

- A tolerance for the establishment of 0.1 ppm in or on dry peas.
- A tolerance for the establishment of 0.05 ppm in the meat and meat by-products of cattle, goats, hogs, horses and sheep.

The Agency's assessment of the tolerance proposals covering residues of carbophenothion in animal tissues (except poultry), is tentative, and is contingent upon the submission of information concerning the interval between the final dosage and slaughter in the cattle feeding study reviewed under this Guidance Document. If the interval was 24 hours or less, then the above tolerance proposals are valid. If the interval is greater than 24 hours, then additional data will be required. Furthermore, the metabolism of carbophenothion in plants and animals is not adequately understood and constitutes a data gap. In the event that toxic metabolites other than those currently known are identified, additional feeding studies using these metabolites may be required.

The Acceptable Daily Intake (ADI) for carbophenothion is 0.0125 mg/kg/day. This is based on an acceptable dog chronic feeding study with a No Observed Effect Level (NOEL) of 5.0 ppm and a safety factor of 10. The Theoretical Maximum Residue Contribution (TMRC), based on relevant food factors and the tolerances cited in 21 CFR 193.50 and 40 CFR 180.156, is 0.5806 mg/day assuming a 1.5 kg diet. Accordingly, the percentage of the ADI used up is 77.42%.

TABLE I.
SUMMARY OF PRESENT TOLERANCES

Commodity	Tolerances (ppm) United States[a]	Canada	Mexico	International (Codex)
alfalfa (fresh)	5.0	-	5.0 *per se*	-
alfalfa (hay)	5.0	-	5.0 *per se*	-
almond hulls	10.0	-	-	-
apples	0.8	0.8 *per se*	0.8 *per se*	1.0
apricots	0.8	-	-	1.0
beans (dry)	0.1	-	0.1 *per se* (negligible residue)	-
beans, snap [b] (succulent form)	0.8	-	0.8 *per se*	-
beans, lima (succulent form)	0.8	-	-	-
bean straw	5.0	-	5.0 *per se*	-
bean (vines)	-	-	-	-
beets, garden (roots)	0.8	-	-	-
beets, garden (tops)	0.8	-	-	-
blueberries	4.0	-	-	-
cantaloups	0.8	-	0.2 *per se*	-
cherries	0.8	0.5 *per se*	-	-
citrus	-	-	2.0 *per se*	2.0
clover (fresh)	5.0	-	-	-
clover (hay)	5.0	-	-	-
corn forage	5.0	-	5.0 *per se*	-
corn (kernels plus cob with husks removed)	0.2		0.2 *per se*	-
undelinted cotton-seed	0.2	-	0.2 *per se*	-
crabapples	0.8	0.8 *per se*	-	-
cucumbers	0.8	-	0.8 *per se*	-
eggplants	0.8	0.5 *per se*	0.8 *per se*	-
figs	0.8	-	0.8 *per se*	-
grapefruit[e]	2.0	-	-	-
grapes	0.8	-	0.2 *per se*	-
lemons[e]	2.0	-	-	-
limes[e]	2.0	-	-	-
milk	-	-	-	0.004
nectarines	0.8	-	-	1.0
olives	0.8	-	-	0.1
olive oil	-	-	-	0.2
onions (green, dry bulb)	0.8	0.8 *per se*	0.8 *per se*	-
oranges[e]	2.0	-	-	-

TABLE I.
SUMMARY OF PRESENT TOLERANCES

Commodity	Tolerances (ppm)			
	United States[a]	Canada	Mexico	International (Codex)
peaches	0.8	-	0.8 *per se*	1.0
pears	0.8	0.8 *per se*	0.8 *per se*	1.0
peas (succulent form)	0.8	-	0.8 *per se*	-
pecans	0.1	-	0.1 *per se* (negligible residue)	0.02
peppers[c]	0.8	0.5 *per se*	0.8 *per se*	-
pimentos	0.8	0.5 *per se*	-	-
plums (fresh prunes)[d]	0.8	0.5 *per se*	-	1.0
quinces	0.8	0.8 *per se*	-	-
sorghum forage	5.0	-	5.0 *per se*	-
sorghum grain	2.0	-	2.0 *per se*	-
soybeans (succulent form)	0.8	-	0.8 *per se*	-
spinach	0.8	-	0.8 *per se*	2.0
strawberries	0.8		0.8 *per se*	-
sugarbeets (roots)	5.0	-	-	0.1
sugarbeets (tops)	5.0	-	-	-
summer squash	0.8	-	0.8 *per se*	-
tangerines[e]	2.0	-	-	-
tea (dried)	20.0	-	-	-
tomatoes	0.8	0.5 *per se*	0.8 *per se*	-
walnuts	0.1	-	0.1 *per se* (negligible residue)	0.02
watermelons	0.8	-	0.8 *per se*	-
fat of meat of cattle, goats, hogs and sheep	0.1	-	-	1.0

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[a] Tolerance is based on residues of carbophenothion and its cholinesterase-inhibiting metabolites.

[b] The Mexican tolerance covers string beans only.

[c] The Mexican tolerance covers chili peppers only.

[d] The Canadian tolerance covers plums and prunes.

[e] A feed additive tolerance of 10 ppm has been established in or on grapefruit, lemons, limes, oranges and drid citrus pulp and citrus meal.

Index of Currently Acceptable Uses**
EPA Index to Pesticide Chemicals

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CARBOPHENOTHION*

TYPE PESTICIDE: Insecticide, Acaricide

FORMULATIONS:
Tech (90%);
FI (25%);
D (1.5%, 2%, 3%);
G (0.825%, 3%, 3.15%, 5%, 5.65%, 10%);
P/T (0.54%);
WP (25%);
EC (0.125 lb/gal, 2 lb/gal, 4 lb/gal, 6 lb/gal, 8 lb/gal, 2.5%)

GENERAL WARNINGS AND LIMITATIONS: All formulations labeled for non-domestic use that are 25 percent and greater and all formulations labeled for domestic use that are 10 percent and greater are RESTRICTED USE PESTICIDES. Shrimp and crabs may be killed at listed application rates. Do not apply where these are important resources.

Worker Protection:

Non-domestic uses: Wear rubber gloves, protective clothing, rubber overshoes, and goggles. Wear a respirator jointly approved by the Mining Enforcement and Safety Administration (formly U.S. Bureau of Mines) and the National Institute of Occupational Safety and Health under the provisions of 30 CFR Part II.

Domestic uses: Wear protective clothing including gloves and shoes, when handling or applying.

Bee Caution:
This product is toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product if bees are visiting the application area.

Agricultural Crop Tolerances:
Tea - 20 ppm (dried)

Livestock Tolerances:
Cattle (fat, meat, meat byproduct) - 0.1 ppm
Goats (fat, meat, meat byproduct) - 0.1 ppm
Hogs (fat, meat, meat byproduct) - 0.1 ppm
Milk (fat) - zero ppm
Sheep (fat, meat, meat byproduct) - 0.1 ppm

*Trithion
S-[[(p-Chlorophenyl)thio]methyl] 0,0-diethyl phosphorodithioate
**covers single active ingredient labeling only

Issued: 5-11-82
Provisional Update: 5-02-84

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CARBOPHENOTHION

Site and Pest | Dosages and Formulation(s) | Tolerance, Use, Limitations

AGRICULTURAL CROPS

General Warnings and Limitations: Do not reenter treated fields within 48 hours unless protective clothing is worn. Do not rotate with any crop used for food or feed which is not registered for use with carbophenothion. Per acre rates may be applied by aircraft. Do not apply carbophenothion-oil tank mixes to trees where soil moisture is low, where soil moisture has recently been low, when temperatures are in excess of 90 F (32.2 C), or in periods of low humidity caused by dry winds. Do not combine carbophenothion-oil tank mixes with sulfur or apply within 30 days of a sulfur application. Do not apply to citrus citron or kumquat. Apply when pest first appears and repeat as needed, unless otherwise specified. On deciduous and citrus fruit crops, per 100 gallon rates may be applied as concentrate applications by low volume ground equipment if the same rate per acre is applied.

In CA observe the following minimum water volume gallonages for per acre rates, on the following crops:

Vegetable and field crops, apply in a minimum of 5 gallons of water by aircraft or in a minimum of 20 gallons of water by ground equipment.

Small fruit crops, apply in a minimum of 7 gallons of water by aircraft or in a minimum of 20 gallons of water by ground equipment.

Deciduous fruit crops, apply in a minimum of 10 gallons of water by aircraft or in a minimum of 40 gallons of water by ground equipment.

Citrus fruit crops, apply in a minimum of 10 gallons of water by aircraft or in a minimum of 100 gallons of water by ground equipment.

In areas other than CA observe the following water volume gallonages for per acre rates, on the following crops:

Vegetable and field crops, apply in a minimum of 1 gallon of water by aircraft, in 5 to 20 gallons of water by low volume ground equipment, or in 20 to 250 gallons of water by high volume ground equipment.

Deciduous fruit crops, apply in a minimum of 5 gallons of water by aircraft, in 20 to 100 gallons of water by low volume ground equipment, or in 100 to 800 gallons of water by high volume ground equipment.

Citrus fruit crops, apply in a minimum of 10 gallons of water by aircraft or in 400 to 2000 gallons of water by ground equipment.

Young fruit plantings, apply in a minimum of 15 gallons of water.

'23001AA	Alfalfa		5 ppm (fresh forage and hay) 28 day pregrazing or preharvest interval through 1 pound per acre for foliar application. Do not make more than 1 application per cutting.
'23003AA	Clover		
IRAEAKA	Meadow spittlebug	0.5-1 lb/A (2-3% D) (25% WP) (4-8 lb/gal EC)	Foliar application. For meadow spittlebug, apply the higher rate.
IRACAIA	Pea aphid		
IRAFAJA	Potato leafhopper		
IRACDPA	Spotted alfalfa aphid		

CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Alfalfa cluster (continued)		
	Pest list continued from previous page.		
LAVBEA	Twospotted spider mite		
23001BA 23003BA	Alfalfa (seed crop) Clover (seed crop)		N.F. Do not graze or feed crop residue to livestock.
LAVAUA	Brown wheat mite	0.5-1 lb/A (2-3% D) (25% WP) (4-8 lb/gal EC)	Foliar application to seed crop.
RACAIA	Pea aphid		
RACDPA	Spotted alfalfa aphid		
LAVBEA	Twospotted spider mite		
OABADA	Serpentine leafminer complex		
03001AA	Almond		10 ppm (hulls) 7 day preharvest interval through 1.8 pounds per acre of dust formulation or 2.5 pounds per acre of spray formulations for foliar application if hulls are to be harvested for feed. Do not make more than 1 application during the fruiting period. Multiple applications may be made if hulls are not to be harvested for feed. Do not allow livestock to graze treated areas.
RACAAB	Aphids (eggs)	0.25-0.5 lb/100 gal [minimum 1 lb/A] (25% WP) (4-6 lb/gal EC) or 2 lb/A (8 lb/gal EC)	Dormant or postharvest application. Tank mix with petroleum distillate.
LAAABB	Mites (eggs)		
RAAABA	Scales (including European fruit lecanium, olive scale, San Jose scale)		
RACAAA	Aphids	1.2-1.8 lb/A (3% D)	Foliar application.
LAAABA	Mites		

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CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Almond (continued)		
RACAAA RAFAAA LAVAAA	Aphids Leafhoppers Spider mites	0.25-0.5 lb/100 gal (25% WP) (4-8 lb/gal EC)	Postharvest application to reduce overwintering populations.
LAVACA LAVASA LAVBEA	Brown mite European red mite Twospotted spider mite	1.05-1.5 lb/A (3% D) or 0.25 lb/100 gal [minimum 1 lb/A] (25% WP) or 1-2 lb/50 gal/A (4 lb/gal EC)	Foliar application.
		0.5-1 lb/20 gal/A (4 lb/gal EC)	Foliar application. Apply by aircraft.
		0.25 lb/100 gal (4 lb/gal EC) or 2-2.5 lb/A (8 lb/gal EC)	Foliar application. In CA, may be tank mixed with petroleum distillate.
LAAABA TAMABA	Mites Peach twig borer	0.5 lb/100 gal (4-8 lb/gal EC) or 0.5 lb/A (8 lb/gal EC)	Use limited to CA. Delayed dormant and foliar application. Apply prebloom and at petal fall.

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CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
04001AA 04002AA 04003AA 04004AA	Apple Crabapple Pear Quince		0.8 ppm 30 day preharvest interval through 1.25 pounds per acre for foliar application. Do not apply to Cortland variety of apple.
RACAAB LAAABB RAXALA RAAABA	Aphids (eggs) Mites (eggs) Pear psylla Scales (including forbes scale, oystershell scale, putnam scale, San Jose scale, scurfy scale)	0.25-0.5 lb/100 gal [minimum 1 lb/A] (25% WP) (4-8 lb/gal EC) or 1.25 lb/A (8 lb/gal EC)	Dormant, delayed dormant, or postharvest application. Tank mix with petroleum distillate.
RACAAA RAFAAA LAVAAA	Aphids Leafhoppers Spider mites	0.25-0.5 lb/100 gal [minimum 1 lb/A] (25% WP) (4-8 lb/gal EC)	Postharvest application to reduce overwintering populations.
RACAUA TBGAZA RAFAAA RACBQA LAVAAA RACBUA	Apple aphid Codling moth Leafhoppers Rosy apple aphid Spider mites (including brown mite, European red mite, twospotted spider mite) Woolly apple aphid	0.8-1.2 lb/A (2-3% D)	Delayed dormant and foliar application. Apply at prepink stage and repeat as needed.
		0.25-0.375 lb/100 gal (25% WP) or 0.25 lb/100 gal [minimum 1 lb/A] (4-8 lb/gal EC)	Foliar application. Apply only after full leaf expansion. Do not repeat at less than 10 day intervals as injury may result. For codling moth, apply at petal fall and repeat at 10 to 14 day intervals until control is achieved.
RACAAB LAVASA	(Apple) Aphids (eggs) European red mite	0.25 lb/100 gal (0.125 lb/gal EC)	Delayed dormant application.
RAKBYA	San Jose scale	0.375 lb/100 gal (0.125 lb/gal EC)	

CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
05001AA	Apricot		0.8 ppm 30 day preharvest interval through 1.8 pounds per acre of dust formulations or 2 pounds per acre of spray formulations for foliar application. Do not allow livestock to graze treated areas.
RACAAB	Aphids (eggs)	0.25-0.5 lb/100 gal [minimum 1 lb/A] (25% WP) (4-8 lb/gal EC) or 2 lb/A (8 lb/gal EC)	Dormant or postharvest application. Tank mix with petroleum distillate.
LAAABB	Mites (eggs)		
RAAABA	Scales (including brown soft scale, European fruit lecanium, San Jose scale)		
RACAAA	Aphids	0.8-1.8 lb/A (2-3% D)	Foliar application.
LAAABA	Mites		
RACAAA	Aphids	0.25-0.5 lb/100 gal [minimum 1 lb/A] (25% WP) (4-8 lb/gal EC)	Postharvest application to reduce overwintering populations.
RAFAAA	Leafhoppers		
LAUAAA	Spider mites		
TBGAZA	Codling moth	0.25 lb/100 gal [minimum 1 lb/A] (25% WP) (4-8 lb/gal EC) or 1.5-2 lb/A (8 lb/gal EC)	Foliar application. For codling moth, apply at petal fall and repeat at 10 to 14 day intervals until control is achieved.
RACBAA	Leafcurl plum aphid		
RAFAAA	Leafhoppers		
RACCAA	Mealy plum aphid		
LAVAAA	Spider mites (including brown mite, European red mite, two-spotted spider mites)		

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CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
15001AA	Beans, Dried-type (dry shelled beans)		0.1 ppm (beans) 5 ppm (bean straw) 21 day precutting (for forage), pregrazing, or preharvest interval through 0.5 pound per acre of spray formulations or 0.6 pound per acre of dust formulations for foliar application. Do not graze or feed treated forage to livestock if dosages above 0.5 pounds per acre of spray formulations or 0.6 pounds per acre of dust formulations are used. Do not make more than 2 applications during the growing season.
RACAMA	Bean aphid	0.6 lb/A (2-3% D) or 0.5-0.75 lb/A (25% WP) (4-8 lb/gal EC)	Foliar application.
NAPAFA	Mexican bean beetle		
RAFAJA	Potato leafhopper		
OABADA	Serpentine leafminer complex		
BEA	Twospotted spider mite		
15001BA	Beans, Dried-type (seed crop)		N.F.
15002BA	Beans, Succulent (Lima)(seed crop)		Do not graze or feed crop residue to livestock.
15003BA	Beans, Succulent (Snap)(seed crop)		
28002BA	Beets (seed crop)		
15010BA	Soybeans, Edible (seed crop)		
13024BA	Spinach (seed crop)		
10013BA	Squash (Summer)(seed crop)		
RACAMA	Bean aphid	0.5-1. lb/A (2-3% D) (25% WP) (4-8 lb/gal EC)	Foliar application to seed crop.
OABADA	Serpentine leafminer complex		
LAVBEA	Twospotted spider mite		
RACAIA	Pea aphid		

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CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
15002AA 15003AA	Beans, Succulent (Lima) Beans, Succulent (Snap)		0.8 ppm (beans) 5 ppm (bean straw) 7 day preharvest interval through 0.75 pound per acre of spray formulations or 1.2 pounds per acre of dust formulations for foliar application. 21 day precutting (for hay) or pregrazing interval through 0.5 pound per acre of spray formulations or 0.6 pound per acre of dust formulations for foliar application. Do not graze or feed treated forage to livestock if dosages above 0.5 pound per acre of spray formulations or 0.6 pound per acre of dust formulations are applied. Do not make more than 2 applications during the growing season for snap beans.
RACAMA NAPAFA RAFAJA OABADA LAVBEA	Bean aphid Mexican bean beetle Potato leafhopper Serpentine leafminer complex Twospotted spider mite	0.6-1.2 lb/A (2-3% D) or 0.5-0.75 lb/A (25% WP) (4-8 lb/gal EC)	Foliar application.
28002AA	Beets		0.8 ppm (roots and tops) No preharvest interval through 0.5 pound per acre of spray formulations or 1.2 pounds per acre of dust formulations for foliar application. 21 day preharvest interval through 0.5 pound per acre of spray formulations or 1.2 pounds per acre of dust formulations for foliar application if tops are to be used for food or feed.
RACAMA NAMBSA OABADA LAVBEA	Bean aphid Potato flea beetle Serpentine leafminer complex Twospotted spider mite	0.4-1.2 lb/A (2-3% D) or 0.25-0.5 lb/A (25% WP) (4-8 lb/gal EC)	Foliar application.

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CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Beets (seed crop)	See Beans, Dried-type (seed crop) cluster.	
01009AA	Blueberry (Lowbush)		4 ppm 14 day preharvest interval through 0.6 pound per acre for foliar application. Do not make more than 2 applications during the growing season.
OBMAPA	Blueberry maggot	0.6 lb/A (3% D)	Use limited to ME. Foliar application. Apply by ground equipment and repeat in 10 to 14 days if needed.
10002AA 10008AA	Cantaloupe Watermelons		0.8 ppm 5 day preharvest interval through 1 pound per acre of spray formulations or 1.2 pounds per acre of dust formulations for foliar applications.
RACAOA	Melon aphid	0.6-1.2 lb/A (2-3% D) or 0.5-1 lb/A (25% WP) (4-8 lb/gal EC)	Foliar application.
MBSA	Potato flea beetle		
ADA	Serpentine leafminer complex		
LAVBEA	Twospotted spider mite		
10002BA 10008BA	Cantaloupe (seed crop) Watermelons (seed crop)		N.F. Do not graze or feed crop residue to livestock.
RAVAUA	Brown wheat mite	0.5-1 lb/A (2-3% D) (25% WP) (4-8 lb/gal EC)	Foliar application to seed crop.
OABADA	Serpentine leafminer complex		
LAVBEA	Twospotted spider mite		

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
05002AA	**Cherry**		0.8 ppm 30 day preharvest interval through 1.8 pounds per acre of dust formulations or 2 pounds per acre of spray formulations for foliar application. Do not allow livestock to graze treated areas.
RACAAB LAAABB RAAABA	Aphids (eggs) Mites (eggs) Scales (including European fruit lecanium, forbes scale, olive scale, San Jose scale)	0.25-0.5 lb/ 100 gal [minimum 1 lb/A] (25% WP) (4-8 lb/ gal EC) or 2 lb/A (8 lb/gal EC)	Dormant or postharvest application. Tank mix with petroleum distillate.
RACAAA LAAABA	Aphids Mites	0.8-1.8 lb/A (2-3% D)	Foliar application.
RACAAA RAFAAA LAVAAA	Aphids Leafhoppers Spider mites	0.25-0.5 lb/ 100 gal [minimum 1 lb/A] (25% WP) (4-8 lb/ gal EC)	Postharvest application to reduce overwintering populations.
LAJBEA TBGAZA RACBAA RAFAAA RACCAA LAVAAA	Cherry rust mites Codling moth Leafcurl plum aphid Leafhoppers Mealy plum aphid Spider mites (including brown mite, European red mite, two-spotted spider mite)	0.25 lb/100 gal [minimum 1 lb/A] (25% WP) (4-8 lb/ gal EC) or 1.5-2 lb/A (8 lb/gal EC)	Foliar application. For codling moth, apply at petal fall and repeat at 10 to 14 day intervals until control is achieved.
	Clover	See Alfalfa cluster.	
	Clover (seed crop)	See Alfalfa (seed crop) cluster.	

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CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
28006AA 15005AA	Corn, Field Corn, Sweet		0.2 ppm (kernels plus cob with husks removed) 5 ppm (forage) 21 day precutting (for forage) or pregrazing interval through 1 pound per acre for foliar application. Do not make more than 1 application during the growing season.
LBDABA LAVBAA LAVBEA	Grass mite Pacific spider mite Twospotted spider mite	1 lb/A (2-3% D) (25% WP) (4-8 lb/gal EC)	Foliar application.
28006BA 15005BA	Corn, Field (seed crop) Corn, Sweet (seed crop)		N.F. Do not graze or feed crop residue to livestock.
RACAMA LAVBEA	Bean aphid Twospotted spider mite	0.5-1 lb/A (2-3% D) (25% WP) (4-8 lb/gal EC)	Foliar application to seed crop.
28007AA	Cotton		0.2 ppm (undelinted cottonseed) No preharvest interval through 1 pound per acre for foliar application. Do not apply after bolls have opened. Do not allow livestock to graze treated areas or feed treated plants to livestock.
LAVAWA TBCAOA LAVAZA LAVBEA	Carmine spider mite Cotton leafworm Tropical spider mite Twospotted spider mite	0.3-1 lb/A (2-3% D) or 0.25-1 lb/A (25% WP) (4-8 lb/gal EC)	Foliar application.
RACAOA TAYAHA	Cotton aphid Cotton leaf-perforator	1 lb/A (2-3% D) (25% WP) (4-8 lb/gal EC)	

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Cotton (continued)		
QAMAYA	Cotton fleahopper	0.5-1 lb/A (2-3% D) (25% WP) (4-8 lb/ gal EC)	
	Crabapple	See Apple cluster.	
10010AA 10013AA	Cucumber Squash (summer)		0.8 ppm 7 day preharvest interval through 1 pound per acre for foliar application.
RACAOA	Melon aphid	0.5-1 lb/A (2-3% D) (25% WP) (4-8 lb/ gal EC)	Foliar application.
RAFAJA	Potato leafhopper		
OABADA	Serpentine leafminer complex		
LAVBEA	Twospotted spider mite		
10010BA 11001BA 28017BA 11004BA 11005BA	Cucumber (seed crop) Eggplant (seed crop) Peppers (seed crop) Pimento (seed crop) Tomato (seed crop)		N.F. Do not graze or feed crop residue to livestock.
OABADA	Serpentine leafminer complex	0.5-1 lb/A (2-3% D) (25% WP) (4-8 lb/ gal EC)	Foliar application to seed crop.
LAVBEA	Twospotted spider mite		
1001AA 28017AA 11004AA	Eggplant Peppers Pimento		0.8 ppm 7 day preharvest interval through 1 pound per acre of spray formulations or 1.2 pounds per acre of dust formulations for foliar application.
NAMBSA	Potato flea beetle	0.5-1.2 lb/A (2-3% D) or 0.5-1 lb/A (25% WP) (4-8 lb/ gal EC)	Foliar application.
RAFAJA	Potato leafhopper		
OABADA	Serpentine leafminer complex		
LAVAZA	Tropical spider mite		
LAVBEA	Twospotted spider mite		
	Eggplant (seed crop)	See Cucumber (seed crop) cluster.	

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CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
06005AA	Fig		0.8 ppm 7 day preharvest interval through 2.5 pounds per acre for foliar application.
LAVBEA	Twospotted spider mite	0.8-2.4 lb/A (2-3% D) or 0.25-0.5 lb/100 gal [minimum 1 lb/A] (25% WP) (4-8 lb/gal EC) or 2-2.5 lb/A (8 lb/gal EC)	Foliar application.
02002AA	Grapefruit		2 ppm (citrus fruits) 10 ppm (dehydrated pulp and meal for cattle feed) No preharvest interval through 2.5 pounds per acre for foliar application. 14 day preharvest interval from above 2.5 through 3.75 pounds per acre for foliar application. 30 day preharvest interval through 5 pounds per acre of spray formulations tank mixed with petroleum distillate for foliar application. Do no apply at less than 30 day intervals. May injure grapefruit in FL if tank mixed with petroleum distillate in the summer or if applied alone in the fall before fruit is fully colored. May cause off-colored spots on grapefruit in TX if applied after July 1 and before fruit is fully colored, or in the summer or fall in other areas before fruit is fully colored. When applied by aircraft, craft should fly over the top of each row to ensure thorough coverage. When applied by ground equip-
02004AA	Lemon		
02005AA	Lime		
006AA	Orange		
007AA	Tangelo		
02008AA	Tangerine		

Use paragraph continued on the next page.

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Grapefruit cluster (continued)		
			ment, apply to both sides of trees to ensure thorough coverage. Do not apply to citrus citron or kumquat.
RAHAGA RAKAEA RAHAHA RARACA RAKAQA RAKBDA RAKAFA	Brown soft scale California red scale Citricola scale Cottonycushion scale Florida red scale Purple scale Yellow scale	0.5-0.75 lb/ 100 gal [minimum 1 lb/A] (25% WP) (4-8 lb/ gal EC) or 3.25 lb/A (8 lb/gal EC)	Foliar application. Tank mix with petroleum distillate.
LAVARA LAJBCA LAVAHA LAVAKA LAVAJA	Citrus red mite Citrus rust mite Sixspotted mite Texas citrus mite Yuma spider mite	1-3 lb/A (2-3% D) or 0.25-0.5 lb/ 100 gal [minimum 1 lb/A] (25% WP) (4-8 lb/ gal EC) or 2-3.25 lb/A (8 lb/gal EC)	Foliar application.
RAKCCA	Snow scales	0.375 lb/ 100 gal (4 lb/gal EC)	Use limited to FL. Foliar application. May be tank mixed with petroleum distillate.

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CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
01014AA	Grapes		0.8 ppm 30 day preharvest interval through 0.5 pound per acre of spray formulations or 1 pound per acre of dust formulations for foliar application. Do not apply to Charbono, Gamay, Golden Muscat, Muscat, and Italia varieties.
RAFAOA LAVBEA	Grape leafhopper Twospotted spider mite	0.6-1 lb/A (2-3% D) or 0.5 lb/A (25% WP) (4-8 lb/gal EC)	Foliar application.
	Lemon	See Grapefruit cluster.	
	Lime	See Grapefruit cluster.	
05003AA 04AA	Nectarine Peach		0.8 ppm 30 day preharvest interval through 1.8 pounds per acre of dust formulations or 2 pounds per acre of spray formulations for foliar application. Do not allow livestock to graze treated areas.
RACAAB RAAABA	Aphids (eggs) Scales (including European fruit lecanium, olive scale, San Jose scale)	0.25-0.5 lb/100 gal [minimum 1 lb/A] (25% WP) (4-8 lb/gal EC) or 1 lb/A (8 lb/gal EC)	Dormant or postharvest application. Tank mix with petroleum distillate.
RACAAA LAAABA	Aphids Mites	0.8-1.8 lb/A (2-3% D)	Foliar application.

CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Nectarine cluster (continued)		
RACAAA RAFAAA LAVAAA	Aphids Leafhoppers Spider mites	0.25-0.5 lb/100 gal [minimum 1 lb/A] (25% WP) (4-8 lb/gal EC)	Postharvest application to reduce overwintering populations.
TBGAZA RACBAA RAFAAA RACCAA LAVAAA	Codling moth Leafcurl plum aphid Leafhoppers Mealy plum aphid Spider mites (including brown mite, European red mite, twospotted spider mite)	0.25-0.5 lb/100 gal [minimum 1 lb/A] (25% WP) (4-8 lb/gal EC) or 1 lb/A (4 lb/gal EC)	Foliar application. Apply per acre rate in 20 gallons of water per acre by aircraft. For codling moth, apply at petal fall and repeat at 10 to 14 day intervals until control is achieved.
LAAABB	Mites (eggs)	0.5 lb/100 gal (25% WP) (4-8 lb/gal EC) or 1 lb/A (8 lb/gal EC)	Use limited to CA. Dormant application. Tank mix with petroleum distillate.
		0.25-0.5 lb/100 gal [minimum 1 lb/A] (25% WP) (4 lb/gal EC)	Postharvest application. Tank mix with petroleum distillate.
LAAABA TAMABA	Mites Peach twig borer	0.5 lb/100 gal (4 lb/gal EC) or 0.5 lb/A (8 lb/gal EC)	Use limited to CA. Delayed dormant and foliar application. Apply prebloom and at petal fall.

CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
28014AA	Olive		0.8 ppm 60 day preharvest interval through 9 pounds per acre for foliar application.
RAHBBA	Black scale	0.5 lb/100 gal [minimum 1 lb/A (25% WP) or 0.25-0.5 lb/100 gal [minimum 1 lb/A] (4 lb/gal EC) or 6-9 lb/A (8 lb/gal EC)	Foliar application. Tank mix with petroleum distillate.
RAKBPA	Oleander scale		
RAKAKA	Olive scale		
RAKBYA	San Jose scale		
14011AA	Onion, Dry		0.8 ppm Soil application (at planting) through 2 pounds per acre.
004AA	Onion, Green		
OACACA	Onion maggot	1-1.5 lb/A or 1.5-2 lb/A (with 18 inch row spacing) (2-3% D) (5-10% G) (25% WP) (4-8 lb/gal EC)	Furrow treatment at seeding or transplanting. Apply lower range for mineral soils and higher range for muck or peat soils. Apply dry formulations using a combination drill, fertilizer spreader, or suitable granular application equipment. For spray formulations, apply per acre rates in 100 gallons of water and apply 3 gallons of finished spray per 1,000 feet of furrow. Keep mixture agitated.
		0.375 lb/25 lb seed (25% WP)	Seed treatment by slurry for the protection of germinating seeds and seedlings. Thoroughly coat seed in a slurry.

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Onion, Dry cluster (continued)		
		1 lb/15-25 lb seed (25% WP)	Seed treatment (dry) for the protection of germinating seeds and seedlings. Thoroughly coat seed with methyl cellulose, then tumble the seed in a seed treater or barrel treater until seed is thoroughly coated. Apply higher rate for muck soil and lower rate for upland soils.
14011BA 16004BA 28019BA	Onion, Dry (seed crop) Onion, Green (seed crop) Sorghum (seed crop)		N.F. Do not graze or feed crop residue to livestock. For sorghum, do not make more than 1 application per growing season.
LAVAUA LAVBEA	Brown wheat mite Twospotted spider mite	0.5-1 lb/A (2-3% D) (25% WP) (4-8 lb/gal EC)	Foliar application to seed crop.
	Orange	See Grapefruit cluster.	
	Peach	See Nectarine cluster.	
	Pear	See Apple cluster.	
15009AA	Peas, Succulent		0.8 ppm 7 day preharvest interval through 0.75 pound per acre of spray formulations or 1.2 pounds per acre of dust formulations for foliar application. Do not graze or feed crop residue to livestock.
RACAIA OABADA LAVBEA	Pea aphid Serpentine leaf-miner complex Twospotted spider mite	0.6-1.2 lb/A (2-3% D) or 0.5-0.75 lb/A (25% WP) (4-8 lb/gal EC)	Foliar application.

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CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
15009BA	Peas, Succulent (seed crop)		N.F. Do not graze or feed crop residue to livestock.
RACAMA RACAIA OABADA LAVBEA	Bean aphid Pea aphid Serpentine leaf-miner complex Twospotted spider mite	0.5-1 lb/A (2-3% D) (25% WP) (4-8 lb/gal EC)	Foliar application to seed crop.
03008AA	Pecan		0.1 ppm Do not apply after husk split through 2.5 pounds per acre for foliar application. Do not allow livestock to graze treated areas.
RACAAA LAAABA	Aphids Mites	0.8-1.8 lb/A (2-3% D)	Foliar application.
RACAAB LAAABB ABA	Aphids (eggs) Mites (eggs) Scales (including European fruit lecanium, San Jose scale)	0.25-0.5 lb/100 gal (25% WP) (4-6 lb/gal EC)	Postharvest application. Tank mix with petroleum distillate.
RACAAA RAFAAA LAVAAA	Aphids Leafhoppers Spider mites	0.25-0.5 lb/100 gal [minimum 1 lb/A] (25% WP) (4 lb/gal EC)	Postharvest application to reduce overwintering populations.
LAVBEA	Twospotted spider mite	0.25 lb/100 gal [minimum 1 lb/A] (25% WP) (4 lb/gal EC) or 2-2.5 lb/A (8 lb/gal EC)	Foliar application.

CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Peppers	See Eggplant cluster.	
	Peppers (seed crop)	See Cucumber (seed crop) cluster.	
	Pimento	See Eggplant cluster.	
	Pimento (seed crop)	See Cucumber (seed crop) cluster.	
05005AA 05006AA	Plum Prune		0.8 ppm 30 day preharvest interval through 1.8 pounds per acre of dust formulations or 2 pounds per acre of spray formulations for foliar application. Do not allow livestock to graze treated areas.
RACAAB LAAABB RAAABA	Aphids (eggs) Mites (eggs) Scales (including European fruit lecanium, olive scale, San Jose scale)	0.25-0.5 lb/ 100 gal [minimum 1 lb/A] (25% WP) (4-8 lb/ gal EC) or 2 lb/A (8 lb/gal EC)	Dormant or postharvest application. Tank mix with petroleum distillate.
RACAAA LAAABA TAMABA	Aphids Mites Peach twig borer	0.5 lb/100 gal (4 lb/gal EC) or 1.5-2 lb/A (8 lb/gal EC)	Use limited to CA. Delayed dormant and foliar application. Apply prebloom and at petal fall.
RACAAA LAAABA	Aphids Mites	0.8-1.8 lb/A (2-3% D)	Foliar application.
RACAAA RAFAAA LAVAAA	Aphids Leafhoppers Spider mites	0.25-0.5 lb/ 100 gal [minimum 1 lb/A] (25% WP) (4-8 lb/ gal EC)	Postharvest application to reduce overwintering populations.

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Plum cluster (continued)		
TBGAZA	Codling moth	0.25-0.5 lb/ 100 gal [minimum 1 lb/A] (25% WP) (4-8 lb/ gal EC) or 1-2 lb/A (8 lb/gal EC)	Foliar application. For codling moth, apply at petal fall and repeat at 10 to 14 day intervals until control is achieved.
RACBAA	Leafcurl plum aphid		
RAFAAA	Leafhoppers		
RACCAA	Mealy plum aphid		
LAVAAA	Spider mites (including brown mite, European red mite, twospotted spider mite)		
	Quince	See Apple cluster.	
28019AA	Sorghum		2 ppm (grain) 5 ppm (forage) 21 day precutting (for forage) or pregrazing interval through 1 pound per acre for foliar application. Do not make more than 2 applications during the growing season for dosages through 0.5 pound per acre. Do not make more than 1 application per growing season for dosages from above 0.5 through 1 pound per acre. Under certain climatic conditions, may cause a slight discoloration to foliage of some varieties.
RACDNA	Greenbug	0.5-1 lb/A (4-8 lb/ gal EC)	Use limited to TX. Foliar application.
LAVBNA	Oligonychus mites	0.5-1 lb/A (4-8 lb/ gal EC)	Foliar application.
RACAIA	Pea aphid		
OAHAIA	Sorghum midge		
LAVBEA	Twospotted spider mite	1 lb/A (2-3% D) (25% WP) or 0.5-1 lb/A (4-8 lb/ gal EC)	
	Sorghum (seed crop)	See Onion, Dry (seed crop) cluster.	

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
15010AA	Soybeans, Edible		0.8 ppm 7 day preharvest interval through 0.75 pound per acre of spray formulations or 1.2 pounds per acre of dust formulations for foliar application. Do not graze or feed crop residue to livestock.
		Refer to Beans, Succulent (snap).	
	Soybeans, Edible (seed crop)	See Beans, Dried-type (seed crop) cluster.	
13024AA	Spinach		0.8 ppm 21 day preharvest interval through 0.5 pound per acre of spray formulations or 1.2 pounds per acre of dust formulations for foliar application.
RACAMA	Bean aphid	0.4-1.2 lb/A (2-3% D) or 0.25-0.5 lb/A (25% WP) (4-8 lb/gal EC)	Foliar application.
OABADA	Serpentine leafminer complex		
LAVBEA	Twospotted spider mite		
	Spinach (seed crop)	See Beans, Dried-type (seed crop) cluster.	
	Squash	See Cucumber cluster.	
	Squash (seed crop)	See Beans, Dried-type (seed crop) cluster.	
01016AA	Strawberry		0.8 ppm 3 day preharvest interval through 0.5 pound per acre of spray formulation or 1.2 pounds per acre of dust formulation for foliar application.
RACBGA	Strawberry aphid	0.5-1.2 lb/A (2-3% D) or 0.5 lb/A (25% WP) (4-8 lb/gal EC)	Foliar application.
LAVBEA	Twospotted spider mite		

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CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
28020AA	Sugar Beets		5 ppm (roots and tops) 14 day preharvest interval through 1 pound per acre for foliar application. Soil application (at seeding) through 1 pound per acre. Tops may be harvested for feed.
RACAMA NHMBSA OABADA LAVBEA	Bean aphid Potato flea beetle Serpentine leafminer complex Twospotted spider mite	0.5-1 lb/A (2-3% D) (25% WP) (4-8 lb/gal EC)	Foliar application.
OAXACA	(Sugarbeet root maggot)	1 lb/A (10% G)	Soil application at seeding. Apply in the drill row just above the seed using a combination drill or suitable granular applicable equipment.
28020BA	Sugar Beets (seed crop)		N.F. (seed crop) 5 ppm (tops) 14 day preharvest interval through 0.9 pound per acre if crop residue is to be fed to livestock.
RACAMA OABADA LAVBEA	Bean aphid Serpentine leafminer complex Twospotted spider mite	0.5-1 lb/A (2-3% D) (25% WP) (4 lb/gal EC)	Foliar application to seed crop.
	Tangelo	See Grapefruit cluster.	
	Tangerine	See Grapefruit cluster.	

CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
11005AA	Tomato		0.8 ppm 7 day preharvest interval through 1 pound per acre of spray formulations or 1.2 pounds per acre of dust formulations.
NAMBSA	Potato flea beetle	0.5-1.2 lb/A (2-3% D) or 0.5-1 lb/A (25% WP) (4-8 lb/ gal EC)	Foliar application.
RAFAJA	Potato leafhopper		
DABADA	Serpentine leaf-miner complex		
RAXAHA	Tomato psyllid		
LAJAHA	Tomato russet mite		
LAVAZA	Tropical spider mite		
LAVBEA	Twospotted spider mite		
	Tomato (seed crop)	See Cucumber (seed crop) cluster.	
03009AA	Walnut		0.1 ppm Do not apply after husk split through 2 pounds per acre for foliar application. Do not allow livestock to graze treated areas.
RACAAA	Aphids	0.8-1.8 lb/A (2-3% D)	Foliar application.
LAAABA	Mites		
RAHAKA	Calico scale	1-2 lb/A (25% WP) (4-6 lb/ gal EC)	Dormant application. Tank mix with petroleum distillate.
RAHALA	European fruit lecanium		
RAHAPA	Frosted scale		
LAAABB	Mites (eggs)		
RACBHA	Walnut aphid		
TBGAZA	Codling moth	1-2 lb/A (25% WP) (4-8 lb/ gal EC)	Foliar application. For codling moth, apply at petal fall and repeat at 10 to 14 day intervals until control is achieved. For scale suppression, apply after eggs have hatched.
RAHALA	(European fruit lecanium)		
LAVASA	European red mite		
LAVBEA	Twospotted spider mite		
RACBHA	Walnut aphid		

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CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Walnut (continued)		
OBMAMA	Walnut husk fly	1 lb/100 gal (25% WP)	Use limited to CA. Foliar application. Apply at first sign of population increase after fly emergence in July. Tank mix with bait.
		1.5 lb/A [minimum 200 gal/A] (25% WP)	Foliar application.
	Watermelons	See Cantaloupe cluster.	
	Watermelons (seed crop)	See Cantaloupe (seed crop) cluster.	

ORNAMENTALS

General Warnings and Limitations: Do not contact treated ornamentals for 24 hours following treatment. Apply when pest first appears and repeat as needed, unless otherwise specified.

(Ornamental Plants (herbaceous, woody shrubs, trees and vines))

/31012AA	African Violets
/31018AA	Amaryllis
/35021AA	Arborvitae
/31025AA	Asparagus Fern
/34022AA	Azalea
/35027AA	Beech
/31038AA	Bird-Of-Paradise
/35030AA	Black Locust
/34031AA	Boxwood
/31046AA	Cacti
/34036AA	Camellia
/31057AA	Carnation
/35037AA	Cedar
/31062AA	China Aster
/31065AA	Chrysanthemum
/31066AA	Cineraria
/35095AA	Citrus (Ornamental)
/31071AA	Coleus
/31077AA	Cosmos
/34045AA	Cotoneaster
/34047AA	Crotons
084AA	Dahlias
/31129AA	Delphinium

Certain ornamentals including some Crassulaceae, certain ferns, and a few very sensitive rose varieties have been injured. When sensitivity is questionable, carbophenothion should be tested on a few plants. Use with caution on tender plants. Otherwise, tolerance of most plants to carbophenothion appears to be excellent.

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	African Violets cluster (continued)		
/35049AA	Elm		
/35050AA	Eucalyptus		
/34053AA	Euonymous		
/31098AA	Euphorbia		
/31215AA	Fibrous Begonia		
/35051AA	Fir		
/35052AA	Flowering Almond		
/35055AA	Flowering Cherry		
/34060AA	Flowering Currant		
/35058AA	Flowering Peach		
/35060AA	Flowering Plum		
/31104AA	Fuchsia		
/34063AA	Gardenia		
/35096AA	Guava (Ornamental)		
/34066AA	Hawthorn		
/34068AA	Heather		
/35068AA	Hemlock		
/34070AA	Holly		
/31121AA	Hollyhock		
/34073AA	Hydrangea		
/34076AA	Ivy		
/34081AA	Jasmine		
/35073AA	Juniper		
/34083AA	Lantana		
/34089AA	Lilac		
/31131AA	Lilies		
/35075AA	Linden		
/35082AA	Magnolia		
/34095AA	Moonflower		
/35085AA	Mountainash		
/34099AA	Myrtle		
/31143AA	Nasturtium		
/35088AA	Norfolk Island Pine		
/34102AA	Oleander		
/31147AA	Orchids		
/39001AA	Ornamental Ferns		
/35097AA	Palm		
/31149AA	Pansies		
/31156AA	Phlox		
/35098AA	Pine		
/34113AA	Pittosporum		
/31159AA	Poinsettia		
/35101AA	Poplar		
/31284AA	Primrose		
/34088AA	Privet		
/34058AA	Pyracantha		
/34118AA	Rhododendron		
/31168AA	Rubber Plant		

CARBOPHENOTHION

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	African Violets cluster (continued)		
35110AA	Sago-Palm		
31184AA	Snapdragon		
31197AA	Sweet Pea		
35119AA	Sycamore		
34222AA	Trumpet-Flower		
31216AA	Tuberous Begonia		
31208AA	Violets		
RACAUA	Apple aphid	0.75-1 lb/ 100 gal (25% WP) (2-8 lb/ gal EC)	Use of emulsifiable concentrate formulations limited to professional pest control operators. Foliar application.
TBKABA	Bagworm		
RACAMA	Bean aphid		
RAHBBA	Black scale		
RAKAUA	Boisduval scale		
RAHAGA	Brown soft scale		
RAKAEA	California red scale		
RAHAHA	Citricola scale		
RAWALA	Citrophilus mealybug		
AWAJA	Citrus mealybug		
VARA	Citrus red mite		
LAJBCA	Citrus rust mite		
RARACA	Cottonycushion scale		
RAHALA	European fruit lecanium		
RAKBVA	Forbes scale		
RAKBAA	Greedy scale		
RAHBAA	Hemispherical scale		
RAKAJA	Latania scale		
RAWAMA	Longtailed mealybug		
RAWAIA	Mexican mealybug		
RACBWA	Monterey pine aphid		
RACATA	Oleander aphid		
RAKAKA	Oleander scale		
RAKBPA	Olive scale		
RAKBHA	Oystershell scale		
RAVALA	Pine bark adelgid		
RAFAJA	Potato leafhopper		
RAKASA	Putnam scale		
RAKADA	Redwood scale		
RACCKA	Rose aphid		
RACBQA	Rosy apple aphid		
RAKBYA	San Jose scale		
LAVAHA	Sixspotted mite		
AVAPA	Spruce spider mite		
KAZA	Tea scale		
LAVAKA	Texas citrus mite		

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	African Violets cluster (continued)		
	Pest list continued from previous page.		
LAVBEA	Twospotted spider mite		
RACBUA	Woolly apple aphid		
RAKAFA	Yellow scale		
LAVAJA	Yuma spider mite		
34036AA	Camellia		
31057AA	Carnation		
31111AA	Gladiolus		
32005AA	Ornamental Evergreens		
34000AA	Ornamental Woody Shrubs		
31208AA	Violets		
RACAAA	Aphids	0.4-0.8 lb/A	Foliar application.
LAVAAA	Spider mites	(2-3% D)	
RAHBBB	Black scale (crawlers)	0.25-0.75 lb/ 100 gal	
RAWAAA	Mealybugs	(25% WP)	
RACBWA	Monterey pine aphid	or	
RAFAJA	Potato leafhopper	0.25-1 lb/	
RACCKA	Rose aphid	100 gal	
RAHAAA	Soft scale insects	(4 lb/gal EC)	
LAVAPA	Spruce spider mite		
LAVBEA	Twospotted spider mite		

(Lawns and Turf (including ground covers))

General Warnings and Limitations: Water material into soil immediately after application. Do not enter treated areas or allow children and pets on lawn for 24 hours and until grass has completely dried. Apply granular formulations by fertilizer spreader and immediately after application thoroughly water to wash granules into root zone. Water lawn thoroughly before application when applying spray formulations.

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
33017AA	Bermudagrass		
33010AA	Lawns		
33008AA	Ornamental Turf		
33050AA	St. Augustinegrass		
QALAEA	Chinch bug	0.86-0.88 lb/ 5,000 sq.ft (1.5% D)	Application to established lawns. Apply around, not in, browned areas.

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations
	Bermudagrass cluster (continued)		
QALAEA	Chinch bug	0.83-0.95 lb/ 5,000 sq.ft (0.825-10% G) or 0.9 lb/5,000 sq.ft (0.54% P/T) or 0.83 lb/100-150 gal/ 5,000 sq.ft (25% WP) (2-8 lb/ gal EC) or 3.125 gal 2.5% EC/250 gal/5,000 sq.ft (2.5% EC)	Use of 2 to 8 pound per gallon emulsifable concentrate formulations limited to professional pest control operators. Application to established lawns and turf. For chinch bug, apply when activity or damage appears (yellowing then browing of localized areas often developing into spots, then spreading through the lawn). Repeat in 30 days. As a preventative for chinch bug, apply as soon as average daily temperatures reach 80 F (26.7 C) and repeat at 60 day intervals.
LAJARA	Bermudagrass mite		
RAWACA	Rhodesgrass mealybug		
MOAAAA	Thrips		
	FOREST, CHAPARREL, NONAGRICULTURAL AND WASTELANDS (includes tree plantations and Christmas tree plantings)		
30005AA	Christmas Tree Plantations		
30006AA	Forest Plantings		
TBGBKA	European pine shoot moth	0.75-1 lb/ 5-50 gal/A (25% WP) (4-8 lb/ gal EC)	Use of emulsifiable concentrate formulations limited to professional pest control operators. Foliar application. Repeat if needed.
TBGACA	Pine tip moth		

	Site and Pest	Dosages and Formulation(s)	Tolerance, Use, Limitations

AERIAL, MOTHPROOFING AND TANK MIX APPLICATIONS

001500
AAAAAA

Aerial Application

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Refer to
AGRICULTURAL CROPS
Alfalfa, Alfalfa (seed crop), Almond, Apple, Apricot, Beans (Dried-type), Beans (Dried-type)-(seed crop), Beans (Succulent)(Snap), Beans (Succulent)(Snap)(seed crop), Beans (Succulent)(Lima) Beans (Succulent)(Lima)(seed crop), Beets, Beets (seed crop), Cantaloupe, Cantaloupe (seed crop), Cherry, Clover, Clover (seed crop), Corn (Field), Corn (Field)(seed crop), Corn (Sweet), Corn (Sweet)(seed crop), Cotton, Crabapple, Cucumber, Cucumber (seed crop), Eggplant, Eggplant (seed crop), Fig, Grapefruit, Grapes, Lemon, Lime, Nectarine, Olive, Orange, Peach, Pear, Peas (Succulent), Peas (Succulent)(seed crop), Pecan, Peppers, Peppers (seed crop), Pimento, Pimento (seed crop), Plum, Prune, Quince, Sorghum, Sorghum (seed crop), Soybeans (Edible), Soybeans (Edible)(seed crop), Spinach, Spinach (seed crop), Squash (Summer), Squash (Summer)(seed crop), Strawberry, Sugar Beets, Sugar Beets (seed crop), Tangelo, Tangerine, Tomato, Tomato (seed crop), Walnut, Watermelon, Watermelon(seed crop)

900300
AAAAAA

Tank Mix

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Refer to
AGRICULTURAL CROPS
Almond, Apple, Apricot, Cherry, Crabapple, Grapefruit, Lemon, Lime, Nectarine, Olive, Orange, Peach, Pear, Pecan, Plum, Prune, Quince, Tangelo, Tangerine, Walnut

CARBOPHENOTHION

Listing of Registered Pesticide Products by Formulation

90% technical chemical
  carbophenothion (058102)
    000476-02162

  carbophenothion (058102) plus xylene range aromatic solvent (086803)
    000476-01546

25% formulation intermediate
  carbophenothion (058102)
    000476-01107

1.5% dust
  carbophenothion (058102)
    005778-00023

2% dust
  carbophenothion (058102)
    000476-01097

3% dust
  carbophenothion (058102)
    000239-01187   000279-02033   000476-01085   006735-00165

0.825% granular
  carbophenothion (058102)
    000539-00242   003442-00584

3% granular
  carbophenothion (058102)
    000539-00239

3.15% granular
  carbophenothion (058102)
    004185-00359

5% granular
  carbophenothion (058102)
    000476-01330   000829-00149   002393-00148

5.65% granular
  carbophenothion (058102)
    006720-00068

10% granular
  carbophenothion (058102)
    000476-01346   007001-00127

0.54% pelleted/tableted
  carbophenothion (058102)
    009545-00001

Listing of Registered Pesticide Products by Formulation (continued)

25% wettable powder

carbophenothion (058102)
000239-01055 000279-01365 000476-01087 001202-000179

0.125 lb/gal emulsifiable concentrate

carbophenothion (058102) plus petroleum distillate (063503)
008590-00203

2 lb/gal emulsifiable concentrate

carbophenothion (058102) plus xylene range aromatic solvent (086803)
000476-01366 000476-01646 006720-00063

4 lb/gal emulsifiable concentrate

carbophenothion (058102)
000239-01054 000279-01807 000476-01088 009859-00169

carbophenothion (058102) plus aromatic petroleum derivative solvent (006501)
000239-01019 001202-00186

carbophenothion (058102) plus xylene (086802)
000635-00525

carbophenothion (058102) plus xylene range aromatic solvent (086803)
000279-01394 000476-01376 002935-00380 005905-00062
006735-00143

6 lb/gal emulsifiable concentrate

carbophenothion (058102) plus xylene range aromatic solvent (086803)
000476-01541

8 lb/gal emulsifiable concentrate

carbophenothion (058102)
002749-00203 003122-00015 006720-00096 007001-00111
009859-00028

carbophenothion (058102) plus aromatic petroleum distillate (006601)
009859-00165

carbophenothion (058102) plus xylene range aromatic solvent (086803)
002737-00030

2.5% emulsifiable concentrate

carbophenothion (058102) plus aromatic petroleum derivative solvent (006501)
005778-00035

CARBOPHENOTHION

State Label Registrations

CA Reg. No.
000239-04143
000239-04153
000239-04154
000279-04005
000279-09531
001202-05016
007001-07669
007001-07685
007001-07687
011079-04796
011079-04797
011656-05894

FL Reg. No.
000829-06771
005778-03295
009169-09492
009859-09135

OR Reg. No.
001871-08925

TX Reg. No.
033722-03275

TABLE A
GENERIC DATA REQUIREMENTS FOR CHEMICAL: CARBOPHENOTHION

§158.120 - PRODUCT CHEMISTRY

Guideline Citation and Name of Test	Test Substance 1/	Guidelines Status	Are Data Required 2/ Yes	No	Footnote Number
Product Identity:					
61-1 - Identity of Ingredients	TGAI	R	☒	☐	
61-2 - Statement of Composition	TGAI	R	☒	☐	
61-3 - Discussion of Formation of Ingredients	TGAI	R	☒	☐	
Analysis and Certification of Product Ingredients					
62-1 - Preliminary Analysis	TGAI		☒	☐	
62-2 - Certification of Limits	TGAI		☒	☐	
62-3 - Analytical Methods for Enforcement of Limits	TGAI	R	☒	☐	
Physical and Chemical Characteristics					
63-2 - Color	TGAI	R	☒	☐	
63-3 - Physical State	TGAI	R	☒	☐	
63-4 - Odor	TGAI	R	☒	☐	

TABLE A
GENERIC DATA REQUIREMENTS FOR CHEMICAL: CARBOPHENOTHION

§158.120 - PRODUCT CHEMISTRY

Guideline Citation and Name of Test	Test 1/ Substance	Guidelines Status	Are Data 2/ Required Yes	No	Footnote Number
Physical and Chemical Characteristics (Continued)					
63- 5 - Melting Point	TGAI	R	☐	☒	
63- 6 - Boiling Point	TGAI	R	☒	☐	
63- 7 - Density, Bulk Density, or Specific Gravity	TGAI	R	☒	☐	
63- 8 - Solubility	TGAI or PAI	R	☒	☐	
63- 9 - Vapor Pressure	PAI	R	☒	☐	
63-10 - Dissociation constant	PAI		☒	☐	
63-11 - Octanol/water partition coefficient	PAI	R	☒	☐	
63-12 - pH	TGAI	R	☒	☐	
63-13 - Stability	TGAI	R	☒	☐	
63-20 - Corrosion Characteristics	TGAI	R	☒	☐	
Other Requirements:					
64-1 - Submittal of samples	Choice	CR	☐	☒	

1/ Composition: TGAI= Technical Grade of the Active Ingredient; PAI= Pure Active Ingredient

2/ Data must be submitted no later than May, 1987.

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition[1]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[2]
§158-125 Residue Chemistry				
171- 4 - Nature of Residue (Metabolism)				
- Plants	PAIRA	Partially	GS0108001 GS0108002 GS0108003* GS0108004 GS0108005	Yes[3]
- Livestock	PAIRA and plant metabolites	Partially	GS0108006 GS0108007	Yes[4]
171- 4 - Residue Analytical Method				
- Plant residues and Animal Residues	TGAI and metabolites	Partially	GS0108008 through GS0108027 GS0108028* GS0108029* GS0108030*	Yes[5]
171- 4 - Storage Stability Data	PAI	Partially	GS0108031* GS0108032*	Yes[6]
171- 4 - Magnitude of the Residue-Residue Studies for Each Food Use				
- Root and Tuber Vegetable				
• beets, garden	EP	Partially	GS0108033	Yes[7]

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition[1/]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[2/]
§158-125 Residue Chemistry				
171- 4 - Magnitude of the Residue-Residue Studies (continued)				
° sugar beets	EP	Partially	GS0108034	Yes[8/]
- Leaves of Root and Tuber Vegetables				
° garden beet tops	EP	Partially	GS0108035	Yes[9/]
° sugar beet tops	EP	Partially	GS0108036	Yes[10/]
- Bulb Vegetables Group				
° onions (green and dry bulb)	EP	Partially	GS0108037	Yes[11/]
- Leafy Vegetables (Except Brassica Vegetables) Group				
° spinach	EP	No		Yes[12/]
- Legume Vegetables (Succulent or Dried) Group				
° dry beans	EP	Yes	GS0108038 GS0108039*	No

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition[1]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[2]
§158-125 Residue Chemistry				
171- 4 - Magnitude of the Residue-Residue Studies (continued)				
° lima beans	EP	Partially	GS0108040	Yes[13]
° peas (succulent and dry)	EP	Partial	GS0108041	Yes[55]
° snap beans (succculent form)	EP	Partially	GS0108042	Yes[14]
° soybeans (succulent form)	EP	Yes	GS0108038 GS0108043	No
- Foliage of Legume Vegetables Group				
° bean straw and vines	EP	Partially	GS0108044	Yes[15]
- Fruiting Vegetables (Except Curcurbits) Group				
° eggplant	EP	Patially	GS0108045	Yes[16]
° peppers	EP	Partially	GS0108046	Yes[17]
° pimentos	EP	No		Yes[18]
° tomatoes	EP	Partially	GS0108047	Yes[19]
- Curcurbit Vegetables Group				
° cantaloupes	EP	No		Yes[20]

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition[1]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[2]
§158-125 Residue Chemistry				
171- 4 - Magnitude of the Residue-Residue Studies (continued)				
° cucumbers	EP	Partially	GS0108048	Yes[21]
° squash	EP	No		Yes[22]
° watermelon	EP	Partially	GS0108049	Yes[23]
- Citrus Fruits Group				
° grapefruit	EP	Partially	GS0108050	Yes[24]
° lemons	EP	Partially	GS0108051	Yes[25]
° limes	EP	Partially	GS0108052	Yes[26]
° oranges	EP	Partially	GS0108053	Yes[27]
° tangerines (including tangelos)	EP	Partially	GS0108054	Yes[28]
- Pome Fruits Group				
° apples	EP	Partially	GS0108055	Yes[29]
° crabapples	EP	No		No[30]

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition[1]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[2]
§158-125 Residue Chemistry				
171- 4 - Magnitude of the Residue-Residue Studies (continued)				
° pears	EP	Partially	GS0108056	No[31]
° quince	EP	No		No[32]
- Stone Fruits Group				
° apricots	EP	Partially	GS0108057	No[33]
° cherries	EP	No		Yes[34]
° nectarines	EP	Partially	GS0108058	Yes[35]
° peaches	EP	Partially	GS0108059	Yes[36]
° plums (fresh prunes)	EP	Partially	GS0108060	Yes[37]
- Small Fruits and Berries Group				
° blueberries	EP	Yes	GS0108061 GS0108062	No
° grapes	EP	Partially	GS0108063	Yes[38]
° strawberries	EP	Partially	GS0108064	Yes[39]

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition[1]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[2]
§158-125 Residue Chemistry				
171- 4 - Magnitude of the Residue-Residue Studies (continued)				
- Tree Nuts Group				
° almond hulls	EP	Partially	GS0108065 GS0108066 GS0108067	Yes[40]
° pecans	EP	Partially	GS0108068*	Yes[41]
° walnuts	EP	Partially	GS0108069 GS0108070*	Yes[42]
- Cereal Grains Group				
° Corn (kernels plus cob with husks removed)	EP	Partially	GS0108071	Yes[43]
° Sorghum (grain)	EP	Partially	GS0108072	Yes[44]
- Forage, Fodder, and Straw of Cereal Grains Group				
° corn (forage)	EP	Partially	GS0108071	Yes[45]
° sorghum (forage)	EP	Partially	GS0108072	Yes[46]

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition[1]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[2]
§158-125 Residue Chemistry				
171- 4 - Magnitude of the Residue-Residue Studies (continued)				
- Non-grass Animal Feeds Group				
° alfalfa (fresh and hay)	EP	Partially	GS0108073 GS0108074	No[47]
° clover	EP	Partially	GS0108075	Yes[48]
- Miscellaneous Crops				
° cottonseed (undelinted)	EP	Partially	GS0108076 GS0108077 GS0108078	Yees[49]
° figs	EP	Partially	GS0108079	Yes[50]
° olives	EP	Partially	GS0108080	Yes[51]
° tea (dried)	EP	Partially	GS0108081* GS0108082*	Yes[52]
- Meat/Milk/Poultry/Eggs				
° fat, meat, and meat by-products of cattle, goats, hogs, and sheep	TGAI or plant metabolites	Partially	GS0108083 GS0108084 GS0108085 GS0108086	Yes[53]

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition 1/	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?2/
§158-125 Residue Chemistry				
171- 4 - Magnitude of the Residues Residue Studies (continued)				
° milk	TGAI or plant metabolites	Yes	GS0108087 GS0108088 GS0108089	No
° poultry and eggs	TGAI or plant metabolites	No		Yes54/

1/ Composition: TGAI = Technical grade of the active ingredient; PAIRA = Pure active ingredient, radiolabelled; EP = end-use product.

2/ Data must be submitted no later than May, 1987.

3/ The uptake, distribution, and metabolism of carbophenothion must be determined following foliar and soil application of ring-labeled [^{14}C]carbophenothion. The identities of residues (particularly unidentified water-soluble compounds) in or on mature plants must be determined.

4/ Metabolism studies utilizing both poultry and ruminants must be submitted. Animals must be dosed with ring-labeled [^{14}C]carbophenothion, [^{14}]carbophenothion sulfoxide, and [^{14}C]carbophenothion sulfone (the major plant residues) in equal amounts and the distribution and characterization of residues must be determined in tissues and milk. If ruminant metabolism is found to differ significantly from that in rats, then swine metabolism data will also be required.

5/ A validated GC method which can be used to enforce the established tolerances for combined residues of carbophenothion and its cholinesterase-inhibiting metabolites in the fat of meat must be submitted. If the requested metabolism studies identify additional metabolites of concern, then new methodology may be required.

6/ Data demonstrating the stability of carbophenothion residues in or on representative plants (such as fruits, leafy vegetables, root and tuber vegetables, and grain) and animal samples stored at freezing temperatures, for intervals approximating the storage intervals of treated samples used to determine the magnitude of the residue, must be submitted.

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

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§158-125 Residue Chemistry
(continued)

7/ Data must be submitted reflecting residues in or on garden beet roots at regular intervals from 0-21 days after foliar application (aerial and ground) of one of the EC formulations and the 25% WP formulation at 0.5 lb ai/A and of one of the D formulations at 1.2 lb ai/A. Tests must be conducted in NY, OR, and WI.

8/ Residue data from sugar beet root samples, 14 days after foliar treatments and at harvest, after soil treatments at 1 lb ai/A must be submitted. The studies should examine the effects of at-planting soil applications of the 10% G, and foliar applications of D, WP, and EC formulations using aerial and ground equipment. The studies must be conducted in the following states: CA, MN and MI.

A study must be submitted detailing the effects of processing sugar beet roots having measurable weathered residues (5 ppm) into pulp, molasses and refined sugar; if residues are found to concentrate in any of these processed products, appropriate food/feed additive tolerances must be proposed.

9/ Data must be submitted reflecting residues in or on garden beet tops 21 days after: (i) ground and aerial foliar applications of an EC formulation at 0.5 lb ai/A (tests conducted in NY and WI): (ii) aerial and ground foliar applications in WI and OR and aerial foliar applications in NY of the 25% WP formulation at 0.5 lb ai/A; and (iii) aerial and ground foliar applications of a D formulation at 1.2 lb ai/A (tests conducted in NY, WI and OR). Alternatively, feeding restrictions which may be imposed must be submitted.

10/ D ata must be submitted reflecting residues in or on sugar beet tops: I) 14 days after ground and aerial foliar applications of the 25% WP and one of the D formulations at 1 lb ai/A (tests conducted in CA, MI, and MN); (ii) 14 days after aerial and ground foliar applications of one of the EC formulations at 1 lb ai/A (tests conducted in MI and MN); and (iii) at intervals from immediately after treatment to harvest following soil applications of the 10% G formulation at 1 lb ai/A (tests conducted in CA, MI and MN). Alternatively, feeding and grazing restrictions may be proposed.

The available data are adequate only to assess the registered use of EC formulations for ground and aerial application in CA. The established tolerance will cover residues resulting from these uses.

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

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§158-125 Residue Chemistry
(continued)

11/ Residue data must be submitted reflecting in-furrow treatment with a representative D or EC formulation (2 lb ai/A) applied at-seeding green onions) and at transplanting (dry bulb onions). Tests must be conducted in CA OR, ID or WA, NY, TX, and MI.

Residues data must be submitted from green and dry bulb onions sampled at several intervals after the following seed treatments:

1. Slurry seed treatment at 0.375 lb ai/25 lb seed.
2. Dry seed treatment at 1 lb ai/15 lb seed. Data must reflect the use of methyl cellulose applied as a sticker.

12/ Residues in or on spinach samples collected 0, 7, 14, and 21 days after foliar treatments with one of the D formulations (1.2 lb ai/A), the 25% WP (0.5 lb ai/A), and one of the EC formulations (0.5 lb ai/A) using both aerial and ground equipment must be submitted. Tests must be conducted in CA, TX, NJ, and either MD or DE.

13/ Data must be submitted reflecting residues in or on succulent lima beans (beans and pods) 7 days after the last two applications of one of the EC and 25% WP formulations at 0.75 lb ai/A/application and one of the D formulations at 1.2 lb/A/application. Both ground and aerial application data must be submitted. Tests must be conducted in CA, DE and WI.

14/ Data must be submitted reflecting residues in or on succulent snap beans 7 days after the last of two applications of one of the EC and the 25% WP formulations at 0.75 lb ai/A/application and one of the D formulations at 1.2 lb ai/A application. Both ground and aerial application data must be submitted. Tests must be conducted in CA, FL, NY, OR, and WI. (EC formulation data are not required from OR or CA.)

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

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§158-125 Residue Chemistry
(continued)

15/ Data must be submitted reflecting residues in or on bean vines and straw (hay) 21 days after the last of two applications of one of the EC and the 25% WP formulations at 0.5 lb ai/A/application and one of the D formulations at 0.6 lb ai/A/application. Both aerial and ground application data must be submitted. Tests must be conducted in CA, DE, and WI (lima beans); CA, FL, NY, OR, and WI (snap beans); and CA, ID, MI, ND, and NE (dried beans). [EC formulation test data are not required for NE.] A tolerance must be proposed for bean vines; alternatively feeding and grazing restrictions may be proposed.

16/ Residue data must be submitted reflecting foliar application of one of the D formulations (I.2 lb ai/A), the 25% WP (1 lb ai/A), and one of the EC formulations (1 lb ai/A) on eggplant made 7 days prior to harvest using ground and aerial equipment. Tests must be conducted in FL and NJ.

17/ Residue data must be submitted reflecting foliar application of one of the D formulations (1.2 lb ai/A), the 25% WP (1 lb ai/A), and one of the EC formulations (1 lb ai/A) made 7 days prior to harvest using ground and aerial equipment. Tests must be conducted in FL, CA and TX.

18/ Residue data must be submitted reflecting foliar application with one of the D formulations (1.2 lb ai/A), the 25% WP (1 lb ai/A), and one of the EC formulations (1 lb ai/A) made 7 days prior to harvest using ground and aerial equipment. Tests must be conducted in the major green pepper production areas (FL, CA, and TX). Alternatively, the requested pepper data may be translated to pimentos.

19/ Residue data must be submitted reflecting foliar application of one of the D formulations (1.2 lb ai/A), the 25% WP (1 lb ai/A), and one of the EC formulations (1 lb ai/A) made 7 days prior to harvest using ground and aerial equipment. Tests must be conducted in CA, and FL.

Residue data must be submitted involving carbophenothion residues in or on the processed products of tomatoes (pomace, puree, catsup, and juice) processed from field-treated tomatoes which contain measurable weathered residues.

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

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§158-125 Residue Chemistry
(continued)

20/ Data must be submitted reflecting residues in or on cantaloupes 5 days after foliar application with one of the D formulations (1.2 lb ai/A), one of the EC formulation (1 lb ai/A), and the 25% WP (1 lb ai/A) using both ground and aerial equipment. Tests must be conducted in CA and TX.

21/ Data must be submitted reflecting residues in or on cucumbers 7 days after foliar application of one of the EC, one of the D, and the 25% WP formulations at 1 lb ai/A using both ground and aerial equipment. Tests must be conducted in CA, FL, MI, NC or SC, and TX.

22/ Data must be submitted reflecting residues in or on summer squash 7 days after foliar application with 25% WP, one of the D, and one of the EC formulations at 1 lb ai/A using ground and aerial equipment. Tests must be conducted in FL, TX, and one representative eastern state.

23/ Data must be submitted in or on watermelon 5 days after foliar application with the 25% WP, one of the EC formulations at 1 lb ai/A, and one of the D formulations at 1.2 lb ai/A using ground and aerial equipment. Tests must be conducted in FL, GA or SC, and TX.

24/ Sufficient data are not available to determine the adequacy of the established tolerances and label directions. The requested field residue data and processing study for oranges will be translated to grapefruit. Note that additional grapefruit data will be required to establish a crop group tolerance.

25/ Residue determinations on whole lemons after the last of five foliar applications (at 30-day intervals) with the 25% WP and one of the EC formulations must be submitted. Samples must reflect residues on the day of the last of five 2.5 lb ai/A treatments, 14 days after the last of five 3.75 lb ai/A treatments, and 30 days after the last of five 5 lb ai/A treatments from tests conducted in AZ and CA.

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§158-125 Residue Chemistry
(continued)

26/ Residue determinations on whole limes must be submitted after the last of five foliar applications (at 30-day intervals) with the 25% WP and one of the EC formulations. Samples must reflect residues on the day of the last of five 2.5 lb ai/A treatments, 14 days after the last of five 3.75 lb ai/A treatments, and 30 days after the last of five 5 lb ai/A treatments from tests conducted in FL.

27/ Residue determinations on whole oranges must be submitted after the last of five foliar applications with the 25% WP and one of the EC formulations. Samples must reflect residues on the day of the last of five 2.5 lb ai/A treatments, 14 days after the last of five 3.75 lb ai/A treatments, and 30 days after the last of five 5 lb ai/A treatments from tests conducted in FL and CA.

Residue data pertaining to dried pulp, peel, oil, molasses, and juice processed from field-treated oranges containing detectable weathered residues must be submitted. This processing study will be translated to grapefruit, lemons, limes, and tangerines.

28/ Sufficient data are not available to determine the adequacy of the established tolerances and label directions. Field residue data and the processing study requested for oranges will be translated to tangerines.

29/ Data must be submitted reflecting residues in or on apples subjected to aerial and ground foliar spray applications of the 25% WP and one of the EC formulations at 1.25 lb ai/A beginning at petal fall and continuing at 10-day intervals until 30 days prior to harvest. Tests must be conducted in WA, MI, and NY.

Data must be submitted reflecting residues in or on apples subjected to aerial and ground foliar applications of one of the D formulations at 1.2 lb ai/A beginning at the prepink stage and continuing at 10-day intervals until 30 days prior to harvest. Tests must be conducted in WA, MI and NY.

Residues must be determined in wet and dry pomace and juice processed from apples bearing measurable weathered residues. If residues are found to concentrate in any of these processed products, appropriate food/feed additive tolerances must be proposed.

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

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§158-125 Residue Chemistry
(continued)

30/ No data are available pertaining to residues of carbophenothion in or on crabapples; however, the data requested for apples will be translated to crabapples and used to evaluate the established tolerance.

31/ The available data are insufficient to assess the established tolerance for residues of carbophenothion in or on pears. However, no additional data are required because the data requested for apples will be translated to pears. It must be noted that translated data may not be used for establishment of a crop group tolerance. Therefore, to establish a crop group tolerance for pome fruits, additional data for pears will be required.

32/ No data are available pertaining to residues of carbophenothion in or on quinces; however, the data requested for apples will be translated to quinces and will be used to evaluate the established tolerance.

33/ The available data do not support the established tolerance for carbophenothion residues in or on apricots. Data requested for peaches will be translated to apricots and used to evaluate the established tolerance.

34/ Residue data must be submitted from sweet and sour cherry samples taken at several intervals, up to and including 30 days after multiple (5-8) aerial and ground foliar sprays of the 25% WP and a representative EC formulation at 2 lb ai/A. The applications must be spaced 10 days apart. Separate tests of a representative D formulation must be made at 10-day intervals at 1.8 lb ai/A. Studies on sweet cherries must be conducted in CA, MI, and either OR or WA. Sour cherry studies must be conducted in MI and NY.

35/ The available data do not support the established tolerance for carbophenothion residues in or on nectarines. Data requested for peaches will be translated to nectarines and will be used to evaluate the established tolerance.

36/ Residue data must be submitted from samples taken at several intervals, up to and including 30 days after multiple (5-8) aerial and ground foliar sprays of the 25% WP and a representative EC formulation at 2 lb ai/A. The applications must occur 10 days apart. Separate tests of either the 2% or 3% D formulation, applied at 10-day intervals at 1.8 lb ai/A, must be conducted. Tests must be conducted in CA, PA, and SC.

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

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§158-125 Residue Chemistry
(continued)

37/ Data requested for cherries will be translated to plums and will be used to evaluate the established tolerance. In addition, residue data are required from dried prunes processed fromm plums having measurable weathered carbophenotion residues. Procurement of such plums may require that exaggerated treatment rates be used.

It must be noted that translated data may not be used to support the establishment of crop group tolerance. Additional data for plums are required to support a crop crop tolerance.

38/ Residue data must be submitted concerning grape samples harvested 30 days after field-treatment at 0.5 lb ai/A with the 25% WP and a representative EC formulation. Both ground and aerial application methods must be tested. The 2% or 3% D formulation must also be tested at 1 lb ai/A. All studies must be conducted in CA. Also required is a study to determine the magnitude of residues remaining in or on raisins, wet and dry grape pomace, raisin waste and grape juice processed from grape samples bearing measurable weathered carbophenothion residues.

39/ Residue data must be submitted for strawberry samples harvested 3 days following treatment with the 25% WP and a representative EC formulation at 0.5 lb ai/A; both ground and aerial application data must be submitted. The studies must be done in CA.

40/ Sufficient data are not available to assess the adequacy of the established tolerance and label directions. The following additional data are required: Residue analysis of almond nutmeats and hulls 7 days following a single application fo the 25% WP at 2.5 lb ai/A, the 3% D at 1.8 lb ai/A, and an EC formulation at 2.5 lb ai/A. Applications must be made using aerial and ground equipment in CA. These must follow a single prebloom treatment with an EC formulation at 0.5 lb ai/100 gal. Note also that an almond nutmeat tolerance must be established.

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

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§158-125 Residue Chemistry
(continued)

41/ Residue data must be submitted reflecting multiple foliar applications with one of the D formulations at 1.8 lb ai/A, the 25% WP at 2.5 lb ai/A and one of the EC formulations at 2.5 lb ai/A using both ground and aerial equipment. Tests must be conducted in AL, GA, and LA.

42/ Residue data must be submitted reflecting multiple foliar applications with one of the D formulations at 1.8 lb ai/A and with the 25% WP and one of the EC formulations at 2 lb ai/A using both ground and aerial equipment. Tests must be conducted in CA and OR.

43/ Sufficient data are not available to assess the adequacy of the established tolerance. In addition, the tolerance definition for corn (kernels plus cobs with husks removed) is inappropriate for field corn grain. The present tolerance definition is applicable only to sweet corn. The following additional data are required:

- Data reflecting residues in or on field corn grain and sweet corn (kernels plus cobs with husks removed) at weekly intervals from 0-21 days after a single foliar treatment (ground-applied) with a registered D, the 25% WP, and a registered EC formulation at 1 lb ai/A. Field corn tests must be conducted in MN, NE, and either IL, IN, or IA. Sweet corn tests must be conducted in MN or WI, OR or WA, FL CA, and NY. Appropriate PHIs must be proposed Also, a tolerance for field corn grain must be proposed.
- Data reflecting residues in or on crude and refined oil from field corn grain bearing measurable weathered residues.
- Data reflecting residues in or on cannery waste processed from sweet corn bearing measurable weathered residues.

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

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§158-125 Residue Chemistry
(continued)

44/ Sufficient data are not available to assess the adequacy of the established tolerance and label directions. The following additional data are required:

- Data reflecting residues at weekly intervals from 0-21 days following single aerial applications of the 2% or 3% D, 25% WP, and any 4-8 lb/gal EC at 1 lb ai/A. Tests must be conducted in KS, NE, and TX.
- Data reflect residues at weekly intervals from 0-21 days following two applications of the formulations listed above at 0.5 lb ai/A. Test locations must include KS, NE, and TX.
- Data reflecting residues in or on flour and milled products processed from sorghum grain having measurable weathered residues. If residues are found to concentrate in any of these processed products, appropriate food additive tolerance must be proposed. (The requested data for flour and milled products processed from corn grain may be translated to sorghum grain.)

45/ Data must be submitted reflecting residues 21 days after a single application of the 2% D or 3% D, 25% WP, and any 4-8 lb/gal EC using ground equipment at 1 lb ai/A; corn forage, silage, and fodder must be sampled. Tests must be conducted in northeastern, north central, and midwestern locations which are the major growing regions, such as IA MN, and NY. Tolerances must be proposed for corn fodder and silage. Alternatively, feeding and grazing restrictions may be proposed.

46/ Data must be submitted reflecting residues in or on sorghum forage, fodder and silage harvested 21 days after a single aerial application at 1 lb ai/A and after two aerial applications at 0.5 lb ai/A of the 25% WP and one of the registered EC and D formulations. Tests must be conducted in KS, NE, and TX. Tolerances must be proposed for sorghum fodder and silage. Alternatively, feeding and grazing restrictions may be proposed.

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

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§158-125 Residue Chemistry
(continued)

47/ Data must be submitted reflecting residues in or on alfalfa (fresh), alfalfa hay, and alfalfa seed samples 28 days after the last of three successive aerial applications (eight in CA) made during one growing season. Tests must reflect use of the 25% WP, one of the D, and one of the EC formulations at 1 lb ai/A in CA, NE, and WI. Upon submission of the data pertaining to alfalfa seed, a tolerance for carbophenothion residues in or on this commodity may be needed if residues in this commodity exceed those of alfalfa hay (5 ppm). A processing study is needed to determine residues in meal processed from field-treated seed containing detectable weathered residues; if residues are found to concentrate in meal, a feed additive tolerance must be proposed.

48/ The available data do not support the established tolerances for carbophenothion residues in or on clover (fresh) or clover hay. However, no additional data will be required specifically for these commodities because the requested data pertaining to combined residues of carbophenothion in or on alfalfa (fresh) and alfalfa hay, when submitted, will be translated to clover (fresh) and clover hay. Note that translatable are not useful for the establishment of a group tolerance. must a group tolerance be desired, additional data will be required for clover (fresh) and clover hay.

49/ Data must be submitted reflecting residues in or on undelinted cottonseed at harvest following 10 weekly applications of the 25% WP, a registered D, and a registered EC formulation; treatments must begin 7 days after planting. Both aerial and ground application data must be submitted. Tests must be conducted in CA, MS and TX.

Data are required reflecting residues in or on hulls, meal, soapstock, and oil (crude and refined) processed from cottonseed containing measurable weathered residues (exaggerated rates may be necessary to obtain detectable residues). If residues are found to concentrate in any of these processed products, appropriate food/feed additive tolerances must be proposed.

§158-125 Residue Chemistry
(continued)

50/ Data must be submitted reflecting residues in or on fresh figs harvested 7 days after the last of two foliar applications (made 7 days apart) of the 25% WP and one of the registered EC formulations at 2.5 lb ai/A, and one of the registered D formulations at 2.4 lb ai/A. Trials must be conducted in CA. Data must reflect both aerial and ground applications. Data reflecting residues in or on dried figs processed from fresh figs having measurable weathered residues must be submitted. If residues are found to concentrate in dried figs, an appropriate food additive tolerance may be needed if residues exceed those on fresh figs.

51/ Data must be submitted reflecting residues in or on green and ripe olives at 0, 30, and 60 days following two foliar applications with the 25% WP and an EC formulation at 9 lb ai/A using ground and aerial equipment. Tests must be conducted in CA.

Data pertaining to carbophenothion residues in or on oil processed from field-treated ripe olives which contain detectable weathered residues must be submitted. If residues are shown to concentrate, a food additive tolerance must be proposed.

52/ Residue data for dried tea produced from foliage treated at 1, 4, and 6 weeks prior to harvest at 0.27 lb ai/A with the 2 lb/gal EC formulation must be submitted. Tests must be conducted in Pakistan, India, and Sri Lanka.

53/ The interval between the final dosage and slaughter in the feeding study must be provided. A 24-hour interval is required. The registrant must petition the Agency to establish a tolerance of 0.05 ppm in the meat and meat by-products of cattle, goats, hogs, horses and sheep.

54/ Poultry feeding studies at 1.6 ppm, 4.8 ppm, and 16 ppm for 28 consecutive days and subsequent analysis on eggs (collected twice daily during the treatment period) and in poultry tissues (muscle, liver, and fat from animals slaughtered within 24 hours of the final feeding) must be submitted.

55/ data are adequate to support the use on succulent peas; however in order to maintain the use on dried peas the registrant must petition the Agency for establishment of a tolerance. A tolerance proposal of 0.1 ppm will be adequate to cover residues resulting from this use.

* Data submitted by Stauffer Chemical Co. Data may be compensable.

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition 1/	Use 2/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?3/
158.130 Environmental Fate					
DEGRADATION STUDIES-LAB:					
161-1 - Hydrolysis	TGAI or PAIRA	A,B,G,H	No		Yes
Photodegradation					
161-2 - In Water	TGAI or PAIRA	A,B,G	No		Yes
161-3 - On Soil	TGAI or PAIRA	A,G	No		Yes
161-4 - In Air	TGAI or PAIRA	Not Applicablr			
METABOLISM STUDIES-LAB:					
162-1 - Aerobic Soil	TGAI or PAIRA	A,B,G,H	No		Yes
162-2 - Anaerobic Soil	TGAI or PAIRA	A	No		Yes4/
162-3 - Anaerobic Aquatic	TGAI or PAIRA	G	No		Yes
162-4 - Aerobic Aquatic	TGAI or PAIRA	Not Applicable			
MOBILITY STUDIES:					
163-1 - Leaching and Adsorption/Desorption	TGAI or PAIRA	A,B,G,H	No		Yes
163-2 - Volatility (Lab)	TEP	A	No		Yes
163-3 - Volatility (Field)	TEP	A	No		Yes

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition [1]	Use [2] Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)? [3]
158.130 Environmental Fate (continued)					
DISSIPATION STUDIES-FIELD:					
164-1 - Soil	TEP	A,B,H	No		Yes
164-2 - Aquatic (Sediment)	TEP	Not Applicable			
164-3 - Forestry	TEP	G	No		Yes
164-4 - Combination and Tank Mixes					Reserved [5]
164-5 - Soil, Long-Term	TEP	A	No		Yes [6]
ACCUMULATION STUDIES:					
165-1 - Rotational Crops (confined)	PAIRA	A	No		Yes
165-2 - Rotational Crops (Field)	TEP	A	No		Yes [7]
165-3 - Irrigated Crops	TEP	Not Applicable			
165-4 - In Fish	TGAI or PAIRA	A,B,G	No		Yes
165-5 - In Aquatic Non-Target Organisms	TEP	G	No		Yes

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

158.130 Environmental Fate
(continued)

1/ Composition: TGAI = Technical grade of the active ingredient; PAIRA = Pure active ingredient, radiolabelled, TEP = Typical end-use product.

2/ The use patterns are coded as follows: A=Terrestrial, Food Crop; B=Terrestrial, Non-Food; C=Aquatic, Food Crop; D=Aquatic, Non-Food; E=Greenhouse, Food Crop; F=Greenhouse, Non-Food; G=Forestry; H=Domestic Outdoor; I=Indoor.

3/ Data listed under 161-1, 161-2, 161-3 and 163-1 must be submitted no later than November, 1984 ; data listed under , 162-1, 162-2, 162-3, 164-1 and 164-3 must be submitted no later than May, 1986 ; all other data listed in Table must be submitted no later than May, 1987 .

4/ Data are needed to support field and vegetable crop uses only.

5/ Data requirements for combinations and tank mixes are reserved.

6/ Data may be required based on the results from the field dissipation/aerobic soil metabolism studies.

7/ For crops rotated on treated areas any one of the following will apply:

a. A tolerance must be obtained for the rotated crop.

b. The product label must include a restriction against the rotation of crops used for food or feed on treated areas.

c. Data must be provided to determine time intervals at which crops planted on treated areas will be free of pesticide residues.

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition[1/]	Use[2/] Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3/]
§158-140 Reentry Protection					
132-1 - Foliar Dissipation	TEP	A,B,H	No		Yes[4/][6/]
132-2 - Soil Dissipation	TEP	A,B,H	No		Yes[5/]
133-3 - Dermal Exposure	TEP	A,B,H	No		Yes[4/]
133-4 - Inhalation Exposure	TEP	A,B,H	No		Yes[4/]

1/ Composition: TEP = Typical end-use product

2/ The use patterns are coded as follows: A=Terrestrial, Food Crop; B=Terrestrial, Non-Food; C=Aquatic, Food Crop; D=Aquatic, Non-Food; E=Greenhouse, Food Crop; F=Greenhouse, Non-Food; G=Forestry; H=Domestic Ourdoor; I=Indoor.

3/ Data must be submitted no later than December, 1986.

4/ A 48 hour reentry interval is imposed for all uses pending the receipt and evaluation of reentry data (use of protective clothing will allow reentry in less than 48 hours).

5/ will be met by data required in 164-1.

6/ For the lawn and turf use, the registrant is required to propose an acceptable reentry interval based on one of the following: (a) data on dissipation of foliar and/or soil residues of carbophenothion (decline curve), on human exposure to those residues, and on toxicity of carbophenothion; or (b) determination of that time time beyond which there are no detectable, dislogeable residues remaining on the turf/lawn area.

TABLE A

GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition[1]	Use [2] Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3]
158.135 Toxicology					
ACUTE TESTING:					
81-1 - Acute Oral Toxicity- Rat	TGAI	A,B,G,H	Partial	00089847	Yes[4]
81-2 - Acute Dermal Toxicity- Rabbit	TGAI	A,B,G,H	No		Yes
81-3 - Acute Inhalation Toxicity- Rat	TGAI	A,B,G,H	No		Yes
81-6 - Dermal Sensitization	TGAI	A, B, G, H	No		Yes
81-7 - Delayed Neurotoxicity - Hen	TGAI	A,B,G,H	Yes	GS010095*	No
SUBCHRONIC TESTING:					
82-1 - 90-Day Feeding -					
Rodent	TGAI	A,B	Partial	00093054	Yes[5]
Non-rodent			Partial	00089852	No[6]
82-2 - 21-Day Dermal - Rabbit	TGAI	A,B,G,H	Not Required		
82-3 - 90-Day Dermal - Rabbit	TGAI	A,B,G,H	Not Required		
82-4 - 90-Day Inhalation - Rat	TGAI	A,B,G,H	Not Required		
82-5 - 90-Day Neurotoxicity- Hen/Mammal	TGAI	A,B,G,H	Not Required		

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition[1]	Use Pattern[2]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3]
158.135 Toxicology (continued)					
CHRONIC TESTING:					
83-1 - Chronic Toxicity - 2 species: Rodent (rat)	TGAI	A	Partial	00093076	Yes[7]
Non-rodent (dog)			Yes	00093076	No
83-2 - Oncogenicity - 2 Rat	TGAI	A	Partial	00093076	Yes[8]
Mouse			No		Yes
83-3 - Teratogenicity - 1st species	TGAI	A	Partial	GS010096	Yes
2nd species			No		Yes
83-4 - Reproduction - Rat 2-generation	TGAI	A	Yes	00036074	No
MUTAGENICITY TESTING					
84-2 - Gene Mutation	TGAI	A,B,G,H	No		Yes
84-2 - Chromosomal Aberration	TGAI	A,B,G,H	No		Yes
84-2 - Other Mechanisms of Mutagenicity	TGAI	A,B,G,H	No		Yes

TABLE A
GENERIC DATA REQUIREMENTS FOR CARROPHENOTHION

Data Requirement	Composition1/	Use 2/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?3/
158.135 Toxicology (continued)					
SPECIAL TESTING					
85-1 - General Metabolsm	PAI or PAIRA	A	Yes	00093111	No
85-2 - Domestic Animal Safety	Not Required				

1/ Composition: TGAI: Technical grade of the active ingredient; PAI = Pure active ingredient; PAIRA = Pure active ingredient, radiolabelled.

2/ The use patterns are coded as follows: A=Terrestrial, Food Crop; B=Terrestrial, Non-Food; C=Aquatic, Food Crop; D=Aquatic, Non-Food; E=Greenhouse, Food Crop; F=Greenhouse, Non-Food; G=Forestry; H=Domestic Outdoor; I=Indoor.

3/ Data must be submitted no later than May, 1987.

4/ Although adequate acute toxicity data exist to place technical carbophenothion in Toxicity Category I on the basis of acute oral and dermal toxicity [GS010097, 00089847], current technical carbophenothion is reported to be 92.35%, whereas technical carbophenothion used for acute toxicity testing was 95%. Analysis of the current material indicates the presence of several contaminants that were not reported to be present in the technical product used for testing.

5/ If a 2-year chronic feeding study with rats is presented, the 90-day study will not be required.

6/ This study will not have to be repeated since there is an adequate 2-year dog study on file with the Agency.

7/ The study can only be considered supplementary since there were insufficient data generated with respect to hematology, urinalysis, and clinical biochemistry, organ weights and other aspects.

8/ The study is considered supplementary since an insufficient number of rats survived the two-year dosing period and there were an insufficient number of tissues available to assess an oncogenic effect of the test material. Several of the rats from each group were of limited usefulness for histopathology because of autolysis.

* Data submitted by Stauffer Chemical Co. Data may be compensable.

TABLE A

GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition[1/]	Use Pattern[2/]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3/]
158.145 Wildlife and Aquatic Organisms					
AVIAN AND MAMMALIAN TESTING					
71-1 - Acute Avian Oral Toxicity	TGAI	A,B,G,H	No		Yes
71-2 - Avian Subacute Dietary Toxicity	TGAI	A,B,G,H	Partially	00093046	Yes[4/]
71-3 - Wild Mammal Toxicity	TGAI	A,B,G	Reserved[5/]		
71-4 - Avian Reproduction	TGAI	A,B,G	Reserved[5/]		
71-5 - Simulated and Actual Field Testing - Mammals and birds	TEP	A,B,G	Reserved[5/]		
AQUATIC ORGANISM TESTING					
72-1 - Freshwater Fish Acute Toxicity	TGAI	A,B,G,H	Yes	00093133 GS0108091 00093046 GS0108090	No[8/]
72-2 - Acute Toxicity To Freshwater Invertebrates	TGAI	A,B,G,H	Partially	GS0108090 00002875	Yes[4/]
72-3 - Acute Toxicity To Estuarine and Marine Organisms	TGAI	A,B[7/]	Yes	00066341	No[8/]
72-4 - Fish Early Life Stage and Aquatic Invertebrate Life-Cycle	TGAI	A,B,G	Reserved[5/][6/]		

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition1/	Use 2/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?3/
158.145 Wildlife and Aquatic Organisms (continued)					
72-5 - Fish - Life-Cycle	TGAI	A,B,G	Reserved5/		
72-6 - Aquatic Organism Accumulation	TGAI, PAI or Degradation Product	A,B,G	Reserved5/		
72-7 - Simulated Actual Field Testing - Aquatic Organisms	TEP	A,B,G	Reserved5/		

1/ Composition: TGAI = Technical grade of the active ingredient; PAI = pure active ingredient; TEP = Typical end-use product;

2/ The use patterns are coded as follows: A=Terrestrial, Food Crop; B=Terrestrial, Non-Food Crop; C=Aquatic, Food Crop; D=Aquatic, Non-Food; E=Greenhouse, Food Crop; F=Greenhouse, Non-Food; G=Forestry, H=Domestic Outdoor; I=Indoor.

3/ Data must be submitted no later than May, 1987 .

4/ Although the study cited is scientifically sound and acceptable for use in a hazard assessment, it does not fulfill guideline requirements.

5/ Reserved studies are pending the outcome of one or more of the following: (1) lower tier testing, (2) Environmental Fate Profile, (3) Toxicology Branch review, and (4) any information and/or data that the registrant may be able to retrieve from its archives that was not reviewed under this standard.

6/ 72-5 Marine-estuarine chronic studies indicated impairment at low test levels. If the Environmental Fate Profile indicates an aquatic contamination potential then this study will be required.

7/ Acute estuarine and marine studies are indicated for crops which are grown in excess of 300,000 acres in coastal counties. However, this requirement has been fulfilled but has not been requested. The request could occur after the environmental fate profile is completed.

8/ Each of these citations stand alone to fulfill the data requirement.

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition 1/	Use Pattern 2/	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)? 3/
158.150 Plant Protection					
121-1 - TARGET AREA PHYTOTOXICITY	EP		No	-	No 4/
NONTARGET AREA PHYTOTOXICITY					
TIER I					
122-1 - Seed Germination/ Seedling Emergence	TGAI		No	-	No 4/
122-1 - Vegetative Vigor	TGAI		No	-	No 4/
122-2 - Aquatic Plant Growth	TGAI		No	-	No 4/
TIER II					
123-1 - Seed Germination/ Seedling Emergence	TGAI		No	-	No 4/
123-1 - Vegetative Vigor	TGAI		No	-	No 4/
123-2 - Aquatic Plant Growth	TGAI		No	-	No 4/
TIER III					
124-1 - Terrestrial Field	TEP		No	-	No 4/
124-2 - Aquatic Field	TEP		No	-	No 4/

1/ Composition: TGAI = Technical grade of the active ingredient; TEP = Typical end-use product; EP= End-use product.
2/ The use patterns are coded as follows: A=Terrestrial, Food Crop; B=Terrestrial, Non-Food Crop; C=Aquatic, Food Crop; D=Aquatic, Non-Food; E=Greenhouse, Food Crop; F=Greenhouse, Non-Food; G=Forestry; H=Domestic Outdoor; I=Indoor.
3/ Data must be submitted no later than Reserved .
4/ These requirements are generally waived unless it is believed that there is a phototoxicity problem.

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition[1]	Use [2] Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[3]
§158.155 Nontarget Insect					
NONTARGET INSECT TESTING - POLLINATORS:					
141-1 - Honey bee acute contact toxicity	TGAI	A,B,G,H	Yes	00036935 05001991	No
141-2 - Honey bee - toxicity of residues on foliage	TEP	A,B,G,H	Yes	00060628 05000837 05008989	No[7]
141-4 - Honey bee subacute feeding study	Reserved[4]				
141-5 - Field testing for pollinators	TEP	A,B,G,H	No	-	No[5]

TABLE A
GENERIC DATA REQUIREMENTS FOR CARBOPHENOTHION

Data Requirement	Composition1/	Use 2/ Pattern	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?3/
§158.155 Nontarget Insect (continued)					
NONTARGET INSECT TESTING - AQUATIC INSECTS:					
142-1 - Acute toxicity to aquatic insects	Reserved6/				
142-2 - Aquatic insect life-cycle study	Reserved6/				
142-3 - Simulated or actual field testing for aquatic insects	Reserved6/				
143-1 thru 143-3 - NONTARGET INSECT TESTING - PREDATORS AND PARASITES	Reserved6/				

1/ Composition: TGAI = Technical grade of the active ingredient; TEP = Typical end-use product

2/ The use patterns are coded as follows: A=Terrestrial, Food Crop; B=Terrestrial, Non-Food; C=Aquatic, Food Crop; D=Aquatic, Non-Food; E=Greenhouse, Food Crop; F=Greenhouse, Non-Food; G=Forestry; H=Domestic Outdoor; I=Indoor.

3/ Data must be submitted no later than Reserved .

4/ Reserved pending development of test methodology.

5/ Data from 1st and 2nd tier studies do not indicate the need for field studies.

6/ Reserved pending Agency decision as to whether the data requirement should be established.

7/ Each of these citations stand alone to fulfill the data requirement.

TABLE B
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING CARBOPHENOTHION

§158.120 - PRODUCT CHEMISTRY

Guideline Citation and Name of Test	Test 1/ Substance	Guidelines Status	Are Data 2/ Required Yes	No	Footnote Number
Product Identity:					
61-1 - Identity of Ingredients	MP	R	☒	☐	
61-2 - Statement of Composition	MP	R	☒	☐	
61-3 - Discussion of Formation of Ingredients	MP	R	☒	☐	
Analysis and Certification of Product Ingredients					
62-1 - Preliminary Analysis	MP	R	☒	☐	
62-2 - Certification of Limits	MP	R	☒	☐	
62-3 - Analytical Methods for Enforcement of Limits	MP	R	☒	☐	
Physical and Chemical Characteristics					
63-2 - Color	MP	R	☒	☐	
63-3 - Physical State	MP	R	☒	☐	
63-4 - Odor	MP	R	☒	☐	

TABLE B
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING CARBOPHENOTHION

§158.120 - PRODUCT CHEMISTRY (Con't)

Guideline Citation and Name of Test	Test 1/ Substance	Guidelines Status	Are Data Required 2/ Yes	No	Footnote Number
Physical and Chemical Characteristics (Continued)					
63-7 - Density, Bulk Density, or Specific Gravity	MP	R	☒	☐	
63-12 - pH	MP	R	☒	☐	
63-14 - Oxidizing or Reducing Action	MP	CR	☒	☐	
63-15 - Flammability	MP	CR	☒	☐	
63-16 - Explodability	MP	R	☒	☐	
63-17 - Storage Stability	MP	R	☒	☐	
63-18 - Viscosity	MP	CR	☒	☐	
63-19 - Miscibility	MP	CR	☒	☐	
63-20 - Corrosion Characteristics	MP	R	☒	☐	
Other Requirements:					
64-1 - Submittal of samples	PAI	CR	☐	☒	

1/ Composition: MP= Manufacturing-Use Product; PAI= Pure Active Ingredient.

2/ Data must be submitted no later than November, 1984 .

TABLE B
PRODUCT SPECIFIC DATA REQUIREMENTS FOR MANUFACTURING-USE PRODUCTS CONTAINING CHEMICAL CARBOPHENOTHION

Data Requirement	Composition [1/]	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)?[2/]
§158.135 Toxicology				
ACUTE TESTING				
81-1 - Acute Oral Toxicity-Rat	MP	No		Yes
81-2 - Acute Dermal Toxicity-Rabbit	MP	No		Yes
81-3 - Acute Inhalation Toxicity-Rat	MP	No		Yes
81-4 - Primary Eye Irritation - Rabbit	MP	No		Yes
81-5 - Primary Dermal Irritation	MP	No		Yes
81-6 - Dermal Sensitization -	MP	No		Yes

1/ Composition: MP = Manufacturing-use product; there are EPA registered MP Products: EPA Reg. No. 476-1107 (25%), EPA Reg. No. 476-1546 (90%) and EPA Reg. No. 476-2162 (90%).

2/ Data must be submitted no later than November, 1984 .

TABLE C

PRODUCT SPECIFIC DATA REQUIREMENTS FOR END-USE PRODUCTS CONTAINING CHEMICAL CARBOPHENOTHION

ta Requirement	Composition 1/	Does EPA Have Data To Satisfy This Requirement? (Yes, No or Partially)	Bibliographic Citation	Must Additional Data Be Submitted Under FIFRA Section 3(c)(2)(B)? 2/
58.135 Toxicology				
ACUTE TESTING				
81-1 - Acute Oral Toxicity- Rat	EP	No		Yes 3/
81-2 - Acute Dermal Toxicity- Rabbit	EP	No		Yes 3/
81-3 - Acute Inhalation Toxicity- Rat	EP	No		Yes 3/

/ Composition: EP = End-Use Product

/ Data must be submitted no later than November, 1984.

/ Registrants have the option of accepting the restricted-use classification, or submitting the data.

II. REQUIREMENT FOR SUBMISSION OF GENERIC DATA

A. This portion of the guidance document is a Notice issued under the authority of FIFRA Section 3(c)(2)(B) and describes, in table format, the data required for maintaining the registrability of each product. Additionally, a bibliography (Appendix II-1) is included that identifies that data considered as part of the data base supporting this standard. EPA has determined that additional generic data described in this Notice must be submitted to EPA for evaluation in order to maintain in effect the registration(s) of your product(s) identified as an attachment to the cover letter accompanying this guidance document. As required by FIFRA Section 3(c)(2)(B), you are required to take appropriate steps to comply with this Notice.

EPA may suspend the registration of each of those products unless, within the specified time, you have informed EPA how you will satisfy the requirements of this Notice. Any such suspension will remain in effect until you have complied with the terms of this Notice.

B. What Generic Data [1] Must Be Submitted. You may ascertain which generic data you must submit by consulting Table A at the end of this chapter. That table shows all the generic data needed to evaluate the continued registrability of all products, and the dates by which the data must be submitted. The required data must be submitted and any necessary studies must be conducted in accordance with EPA-approved protocols, the Pesticide Registration Guidelines 2/, or data collected under the approved protocols of the Organization for Economic Cooperation and Development (OECD). If you wish not to develop data which are necessary to support the registration or reregistration of certain uses appearing in your labeling, you may delete those uses at the time you submit your revised labeling.

1/ Generic data pertain to the properties or effects of a particular ingredient, and thus are relevant to an evaluation of the risks of all products containing that ingredient (or all such products having a certain use pattern), regardless of any such product's unique composition or use. Product-specific data relate only to the properties or effects of a product with a particular composition (or a group of products with closely similar composition).

2/ The Pesticide Registration Guidelines were reproposed on November 24, 1982 in 47 Federal Register 53192.

Also for certain kinds of testing (generally ecological effects), EPA requires the test substance to be a "typical formulation," and in those cases EPA needs data of that type for each major formulation category (e.g., emulsifiable concentrates, wettable powders, granulars, etc.) These are classified as generic data and when needed are specified in Table A. EPA may possess data on certain "typical formulations" but not others. Note: The "typical formulation" data should not be confused with product-specific data (Table B) which are required on each formulation. Product-specific data are further explained in Chapter IV of this document.

C. Options Available for Complying With Requirements to Submit Data

Within 90 days of your receipt of this Notice you must submit to EPA a completed copy of the form entitled "FIFRA Section 3(c)(2)(B) Summary Sheet" [EPA Form 8580-1, Appendix II-2] for each of your products. On that form you must state which of the following methods you will use to comply with the requirements of this Notice:

1. (a) Notify EPA that you will submit the data, and

   (b) either submit the existing data you believe will satisfy the requirement, or state that you will generate the data by conducting testing. If the test procedures you will use deviate from (or are not specified in) the Registration Guidelines or protocols contained in the Reports of Expert Groups to the Chemicals Group, Organization for Economic Cooperation and Development (OECD) Chemicals Testing Programme, you must enclose the protocols you will use.

2. Notify EPA that you have entered into an agreement with one or more other registrants to jointly develop (or share in the cost of developing) the data. If you elect this option, you must notify EPA which registrant(s) are parties to the agreement.

3. File with EPA a completed "Certification of Attempt to Enter Into an Agreement With Other Registrants for Development of Data" (EPA Form 8580-6, Appendix II-3)*/

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*/ FIFRA Section 3(c)(2)(B) authorizes joint development of data by two or more registrants, and provides a mechanism by which parties can obtain an arbitrator's decision if they agree to jointly develop data but fail to agree on all the terms of (Footnote continued at bottom of next page)

4. Request that EPA amend your registration by deleting the uses for which the data are needed. (This option is not available to applicants for new products.)

5. Request voluntary cancellation of the registration(s) of your products for which the data are needed. (This option is not available to applicants for new products.)

D. Procedures for Requesting Changes in Testing Methodology and Extensions of Time

EPA recognizes that you may disagree with our conclusions regarding the appropriate ways to develop the required data or how quickly the data must be submitted. If the test procedures you plan to use deviate from (or are not specified in) the registration guidelines or protocols contained in the reports of the Expert Groups to the Chemical Groups, Organization for Economic Cooperation and Development (OECD) Chemicals Testing Programme, you must submit the protocol for Agency review prior to the initiation of the test.

If you think that you will need more time to generate the required data than is allowed by EPA's schedule, you may

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(Footnote continued from previous page)
the agreement. The statute does not compel any registrant to agree to develop data jointly.

In EPA's opinion, joint data development by all registrants who are subject to the requirements to submit a pertinent item of data or a cost-sharing agreement among all such registrants is clearly in the public interest. Duplication of testing could increase costs, tie up testing facilities, and subject an unnecessarily large number of animals to testing.

As noted earlier, EPA has discretion not to suspend the registration of a product when a registrant fails to submit data required under FIFRA Section 3(c)(2)(B). EPA has concluded that it is appropriate to exercise its discretion not to suspend in ways which will discourage duplicative testing. Accordingly, if (1) a registrant has informed us of his intent to develop and submit data required by this Notice; and (2) a second registrant informs EPA that it has made a bona fide offer to the first registrant to share in the expenses of the testing [on terms to be agreed upon or determined by arbitration under FIFRA Section 3(c)(2)(B)(iii)]; and (3) the first registrant has declined to agree to enter into a cost-sharing agreement, EPA will not suspend the second firm's registration. While the first firm is not required to agree to jointly develop data, EPA is not required to force the second firm to engage in economically inefficient duplicative testing in order to maintain its registration.

submit a request for an extension of time. The extension request must be submitted in writing to the Product Manager. The extension request should state the reasons why you conclude that an extension is appropriate. While EPA considers your request, you must strive to meet the deadline for submitting the required data.

III. REQUIREMENT FOR SUBMISSION OF PRODUCT-SPECIFIC DATA

Note: This Section applies only to manufacturing-use products, not end-use products.

A necessary first step in determining which statements must appear on your product's label is the completion and submission to EPA of product-specific data* listed on the form entitled "Product Specific Data Report" (EPA Form 8580-4, Appendix III-1) to fill "gaps" identified by EPA concerning your product. Under the authority of FIFRA Section 3(c)(2)(B), EPA has determined that you must submit these data to EPA in order to register or reregister your product(s). All of these data must be submitted not later than six months after you receive this guidance document.

"Product-Specific Data Requirements for Manufacturing-Use Products" appearing in Table B permit you to determine which product-specific data you must submit. This can be done by examining the entries in the column of those tables entitled "Must Data Be Submitted Under §3(c)(2)(B)."

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*/ Product specific data pertains to data that support the formulation which is marketed; it usually includes product chemistry data and acute toxicology data.

IV. SUBMISSION OF REVISED LABELING AND PACKAGING INFORMATION

Note: This section applies to end-use products only to the the extent described under Section II of this document. Otherwise, the following information pertains exclusively to manufacturing-use products.

The Agency requires applicants for registration or re-registration to ensure that each label (1) contains accurate, complete, and sufficient instructions and precautions, reflecting the results of data concerning the product and its ingredients, and (2) incorporates labeling format and terminology which are sufficiently standardized to avoid user confusion.

As part of your application, you will be required to submit draft labeling consistent with: applicable product-specific data; the precautionary statements and use directions; and the regulations concerning classification [40 CFR §162.11(c)], packaging [40 CFR §162.16], and labeling [40 CFR §162.10, Appendix IV-1 an IV-2], as indicated by the following paragraphs of this chapter of the guidance document.

If owners of currently registered products fail to submit revised labeling and packaging information complying with this Section and/or Section II, EPA may issue a notice of intent to cancel the registration under FIFRA §6(b)(1).

A. Label Contents

40 CFR §162.10 (Appendix IV-1) requires that certain specific labeling statements must appear at certain locations on the label. This is referred to as format labeling. Specific label items listed below are keyed to Tables D, E, and F (Appendix IV-2).

Item 1. PRODUCT NAME - The name, brand, or trademark is required to be located on the front panel, preferably centered in the upper part of the panel. The name of a product will not be accepted if it is false or misleading. See Appendix IV-1. [40 CFR §162.10(b)]

Item 2. COMPANY NAME AND ADDRESS - The name and address of the registrant or distributor is required on the label. The name and address should preferably be located at the bottom of the front panel or at the end of the label text. See Appendix IV-1. [40 CFR §162.10(c)]

Item 3. NET CONTENTS - A net content statement is required on all labels. The preferred location is the bottom of the front panel immediately above the company name and address, or at the end of the label text. The net contents must be stated in terms of weight, expressed as avoirdupois pounds and ounces, and stated in terms of the largest suitable unit, i.e., "1 pound 10 ounces" rather than "26 ounces." In addition to the required units specified, net contents may be expressed in metric units. See Appendix IV-1. [40 CFR §162.10(d)]

Item 4. EPA REGISTRATION NUMBER - The registration number assigned to the pesticide product must appear on the label, preceded by the phrase "EPA Registration No.," or "EPA Reg. No." The registration number must be set in type of a size and style similar to other print on that part of the label on which it appears and must run parallel to it. The registration number and the required identifying phrase must not appear in such a manner as to suggest or imply recommendation or endorsement of the product by the Agency. See Appendix IV-1. [40 CFR §162.10(e)]

Item 5. EPA ESTABLISHMENT NUMBER - The EPA establishment number, preceded by the phrase "EPA Est." is the final establishment at which the product was produced, and may appear in any suitable location on the label or immediate container. It must also appear on the wrapper or outside container of the package if the EPA establishment registration number on the immediate container cannot be clearly read through such wrapper or container. See Appendix IV-1. [40 CFR §162.10(f)]

Item 6. INGREDIENT STATEMENT - An ingredient statement is required on the front panel and must contain the name and percentage by weight of each active ingredient and the total percentage by weight of all inert ingredients. The preferred location is immediately below the product name. The ingredient statement must run parallel with, and be clearly distinguished from, other text on the panel. It must not be placed in the body of other text. See Appendix IV-1. [40 CFR 162.10(g)]

Item 6A. POUNDS PER GALLON STATEMENT - For liquid agricultural formulations, the pounds per gallon of active ingredient must be indicated on the label.

Item 7. FRONT LABEL PRECAUTIONARY STATEMENTS - All labels are required to have precautionary statements grouped together on the front panel, preferably within a block outline. The table below shows the minimum type size requirements on various size labels, as set forth in the Regulations.

Size of Label on Front Panel in Square Inches	Signal Word as Required Minimum Type Size All Capitals	"Keep Out of Reach of Children" as Required
5 and under	6 point	6 point
above 5 to 10	10 point	6 point
above 10 to 15	12 point	8 point
above 15 to 30	14 point	10 point
over 30	18 point	12 point

Item 7A. CHILD HAZARD WARNING STATEMENT - All labels are required to have the statement "Keep Out of Reach of Children" located on the front panel above the signal word except where contact with children during distribution or use is unlikely. See Appendix IV-1. [40 CFR §162.10(h)(1)(ii)]

Item 7B. SIGNAL WORD - The signal word (Caution, Warning, or Danger) is required on the front panel immediately below the child hazard warning statement. See Appendix IV-1. [40 CFR §162.10 (h)(1)(i)]

Item 7C. SKULL & CROSSBONES AND WORD "POISON" - On products assigned a toxicity Category I on the basis of oral, inhalation, or dermal toxicity, the word "Poison" shall appear on the label in red on a background of distinctly contrasting color and the skull and crossbones shall appear in immediate proximity to the word poison. See Appendix IV-1. [40 CFR §162.10(h)(1)(i)]

Item 7D. STATEMENT OF PRACTICAL TREATMENT - A statement of practical treatment (first aid or other) shall appear on the label of pesticide products in toxicity Categories I, II, and III. See Appendix IV-1. [40 CFR §162.10(h)(1)(iii)]

Item 7E. REFERRAL STATEMENT - The statement "See Side (or Back) Panel for Additional Precautionary Statements" is required on the front panel for all products, unless all required precautionary statements appear on the front panel. See Appendix IV-1. [40 CFR §162.10(h)(1)(iii)]

Item 8. SIDE/BACK PANEL PRECAUTIONARY LABELING - The precautionary statements as listed below must appear together on the label under the heading "PRECAUTIONARY STATEMENTS." The preferred location is at the top of the side or back panel preceding the directions for use, and it is preferred that these statements be surrounded by a block outline. Each of the three hazard warning statements must be headed by the appropriate hazard title. See Appendix IV-1. [40 CFR §162.10 (h)(2)]

Item 8A. HAZARD TO HUMANS AND DOMESTIC ANIMALS - Where a hazard exists to humans or domestic animals, precautionary statements are required indicating the particular hazard, the route(s) of exposure and the precautions taken to avoid accident, injury or damage. See Appendix IV-1. [40 CFR §162.10 (h)(2)(i)]

Item 8B. ENVIRONMENTAL HAZARD - Where a hazard exists to non-target organisms excluding humans and domestic animals, precautionary statements are required stating the nature of the hazard and the appropriate precautions to avoid potential accident, injury, or damage. See Appendix IV-1. [40 CFR §162.10(h)(2)(ii)]

Item 8C. PHYSICAL OR CHEMICAL HAZARD

1. Flammability statement. Precautionary statements relating to flammability of a product are required to appear on the label if it meets the criteria in Appendix IV-3. The requirement is based on the results of the flashpoint determinations and flame extension tests required to be submitted for all products. These statements are to be located in the side/back panel precautionary statements section, preceded by the heading "Physical/Chemical Hazards." Note that no signal word is used in conjunction with the flammability statements.

2. Criteria for declaration of non-flammability. The following criteria will be used to determine if a product is non-flammable:

   a. A "non-flammable gas" is a gas (or mixture of gases) that will not ignite when a lighted match is placed against the open cylinder valve.

   b. A "non-flammable liquid" is one having a flashpoint greater than 350°F (177°C) as determined by the method specified in 40 CFR §163.61-8(c)(13) (ii) of Subpart D.

   c. A "non-flammable aerosol" is one which meets the following criteria:

      i. The flame extension is zero inches, using the method specified in 40 CFR §163.61-8(c)(13)(ii);

ii. There is no flash back; and

iii. The flashpoint of the non-volatile liquid component is greater than 350°F (177°C), determined by the method specified in 40 CFR §163.61-8(c)(13)(i).

3. Declaration of non-flammability. Products which meet the criteria for non-flammability specified above may bear the notation "non-flammable" or "nonflammable (gas, liquid, etc.)" on the label.

   It may appear as a substatement to the ingredients statement, or on a back or side panel, but shall not be highlighted or emphasized (as with an inordinately large type size) in any way that may detract from precaution.

4. Other physical/chemical hazard statements. When chemistry data submitted in accordance with 40 CFR §163.61-10(c) demonstrate hazards of a physical or chemical nature other than flammability, appropriate statements of hazard will be prescribed. Such statements may address hazards of explosivity, oxidizing or reducing capability, or mixing with other substances to produce toxic fumes.

Item 9. PRODUCT CLASSIFICATION: CLASSIFICATION LABELING REQUIREMENTS AND COMPLIANCE SCHEDULE - Section 3(d) of FIFRA requires that all pesticide formulations/uses be classified for either general or restricted use, and that those uses classified as restricted be limited to use by certified applicators or persons under their direct supervision (or subject to such other restrictions as may be imposed by regulation).

In the Registration Standard, the Agency has: (1) indicated certain formulations/uses to be restricted, based either on a previous classification determination made through the optional procedures of 40 CFR §162.30 or based on data already available to the Agency, or (2) indicated certain formulations/uses to be unrestricted, based on data already available to the Agency, or (3) reserved any classification decision until appropriate short-term data are submitted. Uses have not been classified for general use at this time because such a decision requires an evaluation of chronic data, most of which has yet to be generated.

The product-specific data required by the Standard should be used by each registrant to make a classification determination following the criteria of 40 CFR §162.11(c) (Appendix V-4). The draft label(s) submitted to the Agency as part of your application should reflect this determination, and must be consistent with the terms of 40 CFR §162.10 and this guidance package with respect to label language and format for restricted use products. (No label changes with respect to classification are required for products with unrestricted uses.) The rationale supporting a classification proposal by the registrant that differs from a classification determination found in the Standard should be submitted with your application.

During the Agency's review of your application, your proposed classification determination will be evaluated in accordance with the provisions of 162.11(c). You will be notified of the Agency's classification evaluation.

A. Classification Labeling Requirements

1. Unrestricted Uses - No label changes with respect to a classification statement are necessary for those formulations/uses that are unrestricted.

2. Restricted Uses - Pesticide products bearing directions for use for formulations/uses classified restricted shall bear statements of restricted use classification on the front panel as described below:

    a. Front panel statement of restricted use classification.

        i. At the top of the front panel of the label, set in type of the same minimum sizes as required for human hazard signal words (see table in 40 CFR §162.10(h)(1)(iv)), and appearing with sufficient prominence relative to other text and graphic material on the front panel to make it unlikely to be overlooked under customary conditions of purchase and use, the statement "Restricted Use Pesticide" shall appear.

ii. Directly below this statement on the front panel, a summary statement of the terms of restriction shall appear. If use is restricted to certified applicators, the following statement is required: "For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification." If, however, other regulatory restrictions are imposed, the Administrator will define the appropriate wording for the terms of restriction by regulation.

3. Some But Not All Uses Restricted - If you determine that some uses should be classified RESTRICTED and some uses should be unrestricted, several courses of action detailed below are available:

   i. You may delete all RESTRICTED uses and submit a draft label of the registration of your product to reflect only those uses that are unrestricted.

   ii. Unrestricted uses may appear on a RESTRICTED label, but not vice versa. Therefore you have the option of using a RESTRICTED USE label bearing all of your directions for use. If you choose this option, you may not distinguish those uses that are not unrestricted from those that are RESTRICTED.

   iii. You may register two separate products with identical formulations, one containing only unrestricted uses and the other RESTRICTED uses. To do so, submit two applications for reregistration, each containing all forms and necessary labels. Both applications should be submitted simultaneously. Note that the product names will be assigned separate registration numbers.

B. Compliance Schedules

1. Unclassified uses - None.

2. Restricted uses - The compliance schedule for restricted use products is as follows:

No product with a use classified for restricted use under this standard may be released for shipment by the registrant or producer after one year from the date of issuance of this standard, unless such product bears the restricted-use classification. All products still in channels of trade after two years from the date of issuance of this standard must be labeled for restricted-use.

Item 11A. STORAGE AND DISPOSAL BLOCK - All labels are required to bear storage and disposal statements. These statements are developed for specific containers, sizes, and chemical content. Make certain that the statement you use pertains specifically to your product. These instructions must be grouped and appear under the heading "Storage and Disposal" in the directions for use. This heading must be set in the same type sizes as required for the child hazard warning. Refer to Appendix IV-5 for the latest specific storage and disposal product label statements.

Item 11B. DIRECTIONS FOR USE - Directions for use must be stated in terms which can be easily read and understood by the average person likely to use or to supervise the use of the pesticide. When followed, directions must be adequate to protect the public from fraud and from personal injury and to prevent unreasonable adverse effects on the environment. See Appendix IV-1. [40 CFR §162.10]

B. Collateral Information

Bulletins, leaflets, circulars, brochures, data sheets, flyers, and other graphic printed matter which is referred to on the label or which is to accompany the product are termed collateral labeling. Such labeling may not bear claims or representations that differ in substance from those accepted in connection with registration of the product. It should be made part of the response to this notice and submitted for review.

V. INSTRUCTIONS FOR SUBMISSION

All applications prepared in response to this Notice should be addressed as follows:

Product Manager William H. Miller
Phone No. (703) 557-2600
Registration Division (TS-767)
Office of Pesticide Programs
Environmental Protection Agency
Washington, D.C 20460

For each product for which continued registration is desired:

1. Within 90 days from receipt of this document, you must submit the "FIFRA Section 3(c)(2)(B) Summary Sheet" EPA Form 8580-1. Refer to Appendix II-2 with appropriate attachments.

2. Within 6 months from receipt of this document registrants must submit:

   a. Confidential Statement of Formula, EPA Form 8570-4.

   b. Product Specific Data Report, EPA Form 8580-4 (Appendix III-1).

   c. Two copies of any required product-specific data.

   d. Two copies of draft labeling, including the label and associated brochures. If current labeling conforms to the requirements of this guidance document and the results of the short-term data, the registrant may submit such labeling. (End-use product labeling needs to comply specifically with the instruction in Section II of this guidance document.) The labeling should be either typewritten text on 8-1/2 x 11 inch paper or a mockup of the labeling suitable for stortage in 8-1/2 x 11 inch files. The draft label must indicate the intended colors of the final label, clear indication of the front panel label, and the intended type sizes of the text.

3. Within the time set forth in Table A, all generic data must be submitted by the affected registrant(s).

Note: If for any reason any required test is delayed or aborted so that meeting the agreed submission time will be delayed, notify the Product Manager listed above.

After the Supreme Court has ruled on the Monsanto Decision, you will be informed as to when you must submit your Application for Amended Pesticide Registration (EPA Form 8570-1) and the associated data support information.

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GS0108024 Stauffer Chemical Co. (1962). Carbophenothion residue identification in cattle fat tissues. (Unpublished study received unknown date under PP #0366; CDL:RCT 114149.)

GS0108025 Stauffer Chemical Co. (1962). Trithion residue identification in cattle fat tissues. (Unpublished study received August 22, 1962 under PP #0366; CDL:RCB 114151.)

OFFICE OF PESTICIDE PROGRAMS
REGISTRATION STANDARD BIBLIOGRAPHY
Citations Considered to be Part of the Data Base Supporting Registration Under the Standard

GS0108026 Stauffer Chemical Co. (1963). Determination of carbophenothion, Trithion® residues in cow fat by the cholinesterase method. (Unpublished study received unknown date under PP #0366; CDL:RCB 114150.)

GS0108027 Stauffer Chemical Co. (1968). Method #RR68-34: Determination of Trithion and five oxidation products in or on fresh tea, dried tea, brewed tea, and spent tea by gas chromatography. (Unpublished study received January 13, 1972 under PP #2H50006; CDL:RCB not available.)

GS0108028 Stauffer Chemical Co. (1970). Method #WRC-70-77: Determination of residues of Trithion® and its oxygen analogs. (Unpublished study received January 27, 1971 under PP #1F1108; CDL:RCB 117184.)

GS0108029 Stauffer Chemical Co. (1971). Method #WRC 70-77R1: Determination of residues of Trithion® and its oxygen analogs. (Unpublished study received January 13, 1972 under PP #2H5006; CDL:RCB not available.)

GS0108030 Stauffer Chemical Co. (1973). Method #WR 73-9: Determination of residues of carbophenothion and its oxygen analogs in milk and cream. (Unpublished study received February 14, 1973 under PP #4E1418; CDL:RCB 112320.)

GS0108031 Stauffer Chemical Co. (1971). Inter-office correspondence from J.C. McKay to R.L. Riggs dated November 29, 1971 (Unpublished study received January 13, 1972 under PP #2H5006; CDL:RCB not available.)

GS0108032 Stauffer Chemical Co. (1973). Inter-office correspondence from J.C. McKay to R.L. Riggs dated March 1, 1973 (Unpublished study received January 13, 1972 under PP #2H5006; CDL:RCB not available.)

GS0108033 Stauffer Chemical Co. (1957). Data entitled: "Table beets-Trithion residue studies." (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108034 Stauffer Chemical Co. (1957). Data table entitled: "Sugar beets-Trithion residue studies." (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108035 Stauffer Chemical Co. (1957). Data table entitled: "Table beets-Trithion residue studies." (Unpublished study receive December 1, 1957 under PP #0159; CDL:RCB 113405.)

OFFICE OF PESTICIDE PROGRAMS
REGISTRATION STANDARD BIBLIOGRAPHY
Citations Considered to be Part of the Data Base Supporting
Registration Under the Standard

GS0108036 Stauffer Chemical Co. (1957). Data table entitled: "Sugar beets-Trithion residues studies." (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108037 Stauffer Chemical Co. (1959). Trithion Residue Studies. (Unpublished study received Unknown date under PP #0120; CDL:RCB 113545.)

GS0108038 Stauffer Chemical Co. (1956). Data table entitled "Trithion residues on beans (shelled)-1956." (Unpublished study received March 1, 1957 under PP #0120; CDL:RCB 11303.)

GS0108039 Stauffer Chemical Co. (1971). Report Nos. A-120, A-121, A-122, 328, 338, 378, 2436, and 2468 in Section D. (Unpublished study received January 27, 1971 under PP #1F1108;CDL:RCB 117124.)

GS0108040 Stauffer Chemical Co. (1957). Data table entitled: "Lima beans-Trithion residue studies." (Unpublished study received received December 1, 1957 under PP #0159; CDL:RBC 113405.)

GS0108041 Stauffer Chemical Co. (1957). Data table entitled "Peas-Trithion residue studies." (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108042 Stauffer Chemical Co. (1957). Data table entitled "Green beans-Trithion residue studies." (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108043 Stauffer Chemical Co. (1957). Data table entitled "Peas-Trithion residue studies." (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108044 Stauffer Chemical Co. (1961). Data table entitled "Trithion residue studies-Bean straw." (Unpublished study received January 1, 1961 under PP #0334; CDL:RCB 114020.)

GS0108045 Stauffer Chemical Co. (1957). Eggplant-Trithion Residue Studies. (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108046 Stauffer Chemical Co. (1957). Peppers-Trithion Residue Studies. (Unpublished study received December 1, 1957 under PP #0159; CDL:RBC 113405.)

OFFICE OF PESTICIDE PROGRAMS
REGISTRATION STANDARD BIBLIOGRAPHY
Citations Considered to be Part of the Data Base Supporting Registration Under the Standard

GS0108047 Stauffer Chemical Co. (1957.) Tomatoes-Trithion Residue Studies. (Unpublished study received December 1, 1957 under PP #0159; CDL:RBC 113405.)

GS0108048 Stauffer Chemical Co. (1959.) Trithion residue studies-cucumbers. (Unpublished study received Unknown date under PP #0201;CDL:RCB 113545.)

GS0108049 Stauffer Chemical Co. (1959.) Watermelon-Trithion residue studies. (Unpublished study received December 1, 1957 under PP#0159; CDL:RCB 113405.)

GS0108050 Stauffer Chemical Co. (1957.) Trithion residues in or on oranges, citrus citron, grapefruit, kumquats, lemons, limes, tangelos, and tangerines. Tables B and D. (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108051 Stauffer Chemical Co. (1957.) Trithion residues in or on oranges, citrus citron, grapefruit, kumquats, lemons, limes, tangelos, and tangerines. Table F. (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108052 Stauffer Chemical Co. (1957.) Section D. Trithion residues in or on oranges, citrus citron, grapefruit, kumquats, lemons, limes, tangelos, and tangerines. Table H. (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108053 Stauffer Chemical Co. (1957.) Section D. Trithion residues in or on oranges, citrus citron, grapefruit, kumquats, lemons, limes, tangelos, and tangerines. Tables A, C, and E. (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108054 Stauffer Chemical Co. (1957.) Section D. Trithion residues in or on oranges, citrus citron, grapefruit, kumquats, lemons, limes, tangelos, and tangerines. Table G. (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108055 Stauffer Chemical Co. (1957.) Tables K-S in Section D. (Unpublished study received March 1, 1957 under PP #0120; CDL:RCB 113303.)

GS0108056 Stauffer Chemical Co. (1957.) Table T in Section D. (Unpublished study received March 1, 1957 under PP #0120; CDL:RCB 113303.)

OFFICE OF PESTICIDE PROGRAMS
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Citations Considered to be Part of the Data Base Supporting Registration Under the Standard

GS0108057 Stauffer Chemical Co. (1957). Apricots-Trithion residue studies. (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108058 Stauffer Chemical Co. (1957). Nectarines-Trithion residue studies. (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108059 Stauffer Chemical Co. (1957). Peaches-Trithion residue studies. (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108060 Stauffer Chemical Co. (1957). Cherries, Plums, and Prunes. (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108061 IR-4 Project. (1973). Section D. FSDS Nos. A-0132-3, B-0553-8, A-6004-T, B-0848, and A-5981. (Unpublished study received October 4, 1973 under PP #4E1434; CDL:RCB 112371.)

GS0108062 IR-4 Project. (1973). FSDS Nos. A-8372. (Unpublished study received September 4, 1974 under PP #4E1412; CDL:RCB 118319.)

GS0108063 Stauffer Chemical Co. (1957). Table I: Chromatographic analysis of residues. (Unpublished study received March 1, 1957 under PP #0120; CDL:RCB 113303.)

GS0108064 Stauffer Chemical Co. (1957). Data table entitled "Strawberries-Trithion residue studies." (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108065 Stauffer Chemical Co. (1957). Section D. Trithion Residues on Almonds (Meats)-1956. (Unpublished study received March 1, 1957 under PP # 0120; CDL:RCB 113303.)

GS0108066 Stauffer Chemical Co. (1957). Almonds-Hulls and Kernels-Trithion Residues Studies. (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108067 Stauffer Chemical Co. (1961). Trithion Residues Studies-Almonds -Hulls and Trithion Residue Studies-Almonds-Meats. Section D. (Unpublished study received January 1, 1961 under PP #0334; CDL:RCB 114020.)

OFFICE OF PESTICIDE PROGRAMS
REGISTRATION STANDARD BIBLIOGRAPHY
Citations Considered to be Part of the Data Base Supporting Registration Under the Standard

GS0108068 Stauffer Chemical Co. (1971). Crop Residue Reports dated 9/30/70: B-0208 and B-0188; 10/22/70: B-0195 and B-0147; and 11/2/70: B-1023. (Unpublished study received January 27, 1971 under PP #1F1108; CDL:RCB unknown.)

GS0108069 Stauffer Chemical Co. (1957). Trithion Residues on Walnuts (Meats)-1956. (Unpublished study received March 1, 1957 under PP #0120; CDL:RCB 113303.)

GS0108070 Stauffer Chemical Co. (1971). Crop Residue Report Nos. B-1061 (dated 10/5/70), B-1062 (dated 10/5/70), B-1063 (dated 10/22/70), B-1064 (dated 9/30/70), and B-1065 (dated 10/22/70) (Unpublished study received January 27, 1971 under PP #0334;CDL:RCB unknown.)

GS0108071 Stauffer Chemical Co. (1961). Trithion Residue Studies-Field Corn. (Unpublished study received January 1, 1961 under PP #0334; CDL:RCB 114020.)

GS0108072 Stauffer Chemical Co. (1961). Trithion Residue Studies-Sorghum. (Unpublished study received January 1, 1961 under PP #0334; CDL:RCB 114020.)

GS0108073 Stauffer Chemical Co. (1961). Determination of Trithion residues on alfalfa after spraying at 8 oz. per acre. Report to Stauffer Chemical Co., (Unpublished study received January 1, 1976 under PP #0334; CDL:RCB 114020.)

GS0108074 Stauffer Chemical Co. (1961). Trithion residue studies-forage crops. (Unpublished study received January 1, 1961 under PP #0334; CDL:RCB 114020.)

GS0108075 Stauffer Chemical Co. (1961). Trithion residue studies-Clover. (Unpublished study received January 1, 1961 under PP #0334; CDL:RCB 114020.)

GS0108076 Stauffer Chemical Co. (1956). Data table entitled: "Trithion residues on cottonseed-1956." (Unpublished study received March 1, 1957 under PP #0120; CDL:RCB 113303.)

GS0108077 Stauffer Chemical Co. (1959). Data table entitled: "Trithion residue studies-Undelinted cottonseed." (Unpublished study received Unknown date under PP #0120; CDL:RCB 113545.)

OFFICE OF PESTICIDE PROGRAMS
REGISTRATION STANDARD BIBLIOGRAPHY
Citations Considered to be Part of the Data Base Supporting Registration Under the Standard

GS0108078 Stauffer Chemical Co. (1961). "Trithion residue studies-cotton foliage." (Unpublished study received January 1, 1961 under PP #0334; CDL:RCB 114020.)

GS0108079 Stauffer Chemical Co. (1959). Data table entitled: "Trithion Residue Studies-Figs." (Unpublished study received Unknown date under PP #0120; CDL:RCB 113545.)

GS0108080 Stauffer Chemical Co. (1957). Olives-Trithion residue studies, Section D. (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB unknown.)

GS0108081 Stauffer Chemical Co. (1971). Trithion tea food additive petition. Tea residue data. Report (FSDS) Nos. A-1468, A-1315, and B-2038. (Unpublished study received January 13, 1972 under PP #2H5006; CDL:RCB unknown.)

GS0108082 Stauffer Chemical Co. (1973). Supplementary data. Carbophenothion/dried tea. Report (FSDS) Nos. B-2038-2 and B-2038-4. (Unpublished study received January 13, 1972 under PP #2H5006; CDL:RCB unknown.)

GS0108083 Stauffer Chemical Co. (1961). Tissue analysis. (Unpublished study received January 1, 1961 under PP #0334; CDL:RCB 114020.)

GS0108084 Stauffer Chemical Co. (1962). Trithion residue identification in cattle fat tissues. (Unpublished study received August 22, 1969 under PP #0366; CDL:RCB 114149.)

GS0108085 Stauffer Chemical Co. (1962). Carbophenothion residue identification in cattle tissues. (Unpublished study received unknown date under PP #0366; CDL:RCB 114149.)

GS0108086 Stauffer Chemical Co. (1962). Cattle spray program. (Unpublished study received unknown date under PP #0366; prepared by Hazelton Nuclear Scientific Corp.; CDL:RCB 114149.)

GS0108087 Stauffer Chemical Co. (1957). The analysis of milk of cattle fed Trithion. (Unpublished study received December 1, 1957 under PP #0159; CDL:RCB 113405.)

GS0108088 Stauffer Chemical Co. (1957). Subacute feeding-cows. (Unpublished study received December 1, 1957 under PP #0159; prepared by Hazelton Nuclear Scientific Corp., CDL:RBC 113406.)

OFFICE OF PESTICIDE PROGRAMS
REGISTRATION STANDARD BIBLIOGRAPHY
Citations Considered to be Part of the Data Base Supporting Registration Under the Standard

GS0108089 Stauffer Chemical Co. (1961). Milk analysis. (Unpublished study received January 1, 1961 under PP #0334; CDL:RCB 114020.)

GS0108090 Handbook of Acute Toxicity of Chemicals to Fish and Aquatic Invertebrates (1980), USDI/FWS, Resource Publication 137.

GS0108091 Beltsville Lab (EPA) static Jan. test #1002 (July 16, 1976) 96-hour Rainbow Trout Study.

GS0102092 Stauffer Chemical Co. (1956). Section A. (Unpublished study received June 1, 1956 under PP #0084; CDL:RCB 113229.)

GS0108093 Stauffer Chemical Co. (1961). Section A. (Unpublished study received January 1, 1961 under PP #0334; CDL:RCB 114023.)

GS010094 Stauffer Chemical Co. (1973). Section A. (Unpublished study received unknown date under PP #2H5006; CDL:RCB Unknown.)

GS010095 Stauffer Chemical Co. (1978). Acute Delayed Neurotocity. (Unpublished study received unknown date under EPA Registration No. 476-2162.)

GS010096 Stauffer Chemical Co. (1966). Three Generation Reproduction - Rats. (Unpublished study received unknown date; CDL:TOX 250969.)

GS010097 Gaines, T.B. (1969). Acute Toxicology of Pesticides. Toxicology and Applied Pharmocology (14):515-534.

FIFRA SECTION 3(C)(2)(B) SUMMARY SHEET

EPA REGISTRATION NO

PRODUCT NAME

APPLICANT'S NAME

DATE GUIDANCE DOCUMENT ISSUED

With respect to the requirement to submit "generic" data imposed by the FIFRA section 3(C)(2)(B) notice contained in the referenced Guidance Document, I am responding in the following manner:

☐ 1. I will submit data in a timely manner to satisfy the following requirements. If the test procedures I will use deviate from (or are not specified in) the Registration Guidelines or the Protocols contained in the Reports of Expert Groups to the Chemicals Group, OECD Chemicals Testing Programme, I enclose the protocols that I will use:

☐ 2. I have entered into an agreement with one or more other registrants under FIFRA section 3(C)(2)(B)(ii) to satisfy the following data requirements. The tests, and any required protocols, will be submitted to EPA by:

NAME OF OTHER REGISTRANT

☐ 3. I enclose a completed "Certification of Attempt to Enter Into an Agreement with Other Registrants for Development of Data" with respect to the following data requirements:

☐ 4. I request that you amend my registration by deleting the following uses (this option is not available to applicants for new products):

☐ 5. I request voluntary cancellation of the registration of this product. (This option is not available to applicants for new products.)

REGISTRANT'S AUTHORIZED REPRESENTATIVE	**SIGNATURE**	**DATE**

EPA Form 8580-1 (10-82)

OMB Approval No. 2000-0468 (Expires: 12-31-83

CERTIFICATION OF ATTEMPT TO ENTER INTO AN AGREEMENT WITH OTHER REGISTRANTS FOR DEVELOPMENT OF DATA

(To qualify, certify __ALL__ four items)

1. I am duly authorized to represent the following firm(s) who are subject to the requirements of a Notice under FIFRA Section 3(c)(2)(B) contained in a Guidance Document to submit data concerning the active ingredient:

GUIDANCE DOCUMENT DATE

ACTIVE INGREDIENT

NAME OF FIRM	EPA COMPANY NUMBER

(This firm or group of firms is referred to below as "my firm".)

2. My firm is willing to develop and submit the data as required by that Notice, if necessary. However, my firm would prefer to enter into an agreement with one or more other registrants to develop jointly, or to share in the cost of developing, the following required items or data:

3. My firm has offered in writing to enter into such an agreement. Copies of the offers are attached. That offer was irrevocable and included an offer to b bound by an arbitration decision under FIFRA Section 3(c)(2)(B)(iii) if final agreement on all terms could not be reached otherwise. This offer was mad to the following firm(s) on the following date(s):

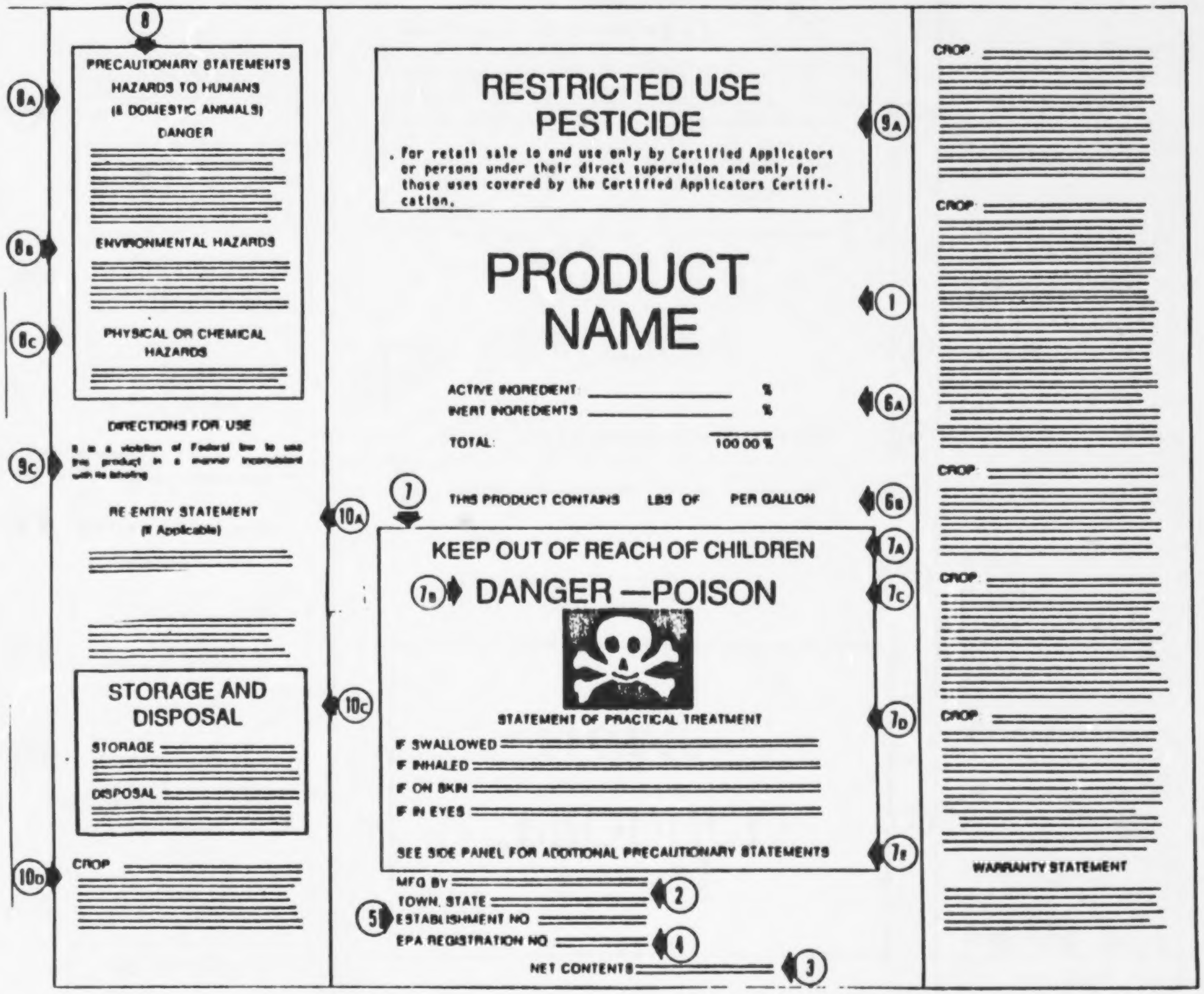
NAME OF FIRM	DATE OF OFFER

However, none of those firm(s) accepted my offer.

4. My firm requests that EPA not suspend the registration(s) of my firm's product(s), if any of the firms named in paragraph (3) have agreed to submit the data listed in paragraph (2) above in accordance with the Notice. I understand EPA will promptly i me whether my firm must submit data to avoid suspension of its registration(s) under FIFRA Section 3(c)(2)(B). (This statemer does not apply to applicants for new products.) I give EPA permission to disclose this statement upon request.

TYPED NAME	SIGNATURE	DATE

Appendix IV-1


8
8A
PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS
(& DOMESTIC ANIMALS)
DANGER
8B
ENVIRONMENTAL HAZARDS
8C
PHYSICAL OR CHEMICAL HAZARDS
DIRECTIONS FOR USE
9C
RE ENTRY STATEMENT
(If Applicable)
STORAGE AND DISPOSAL
STORAGE
DISPOSAL
10D
CROP
10A
10C
RESTRICTED USE PESTICIDE
9A
PRODUCT NAME
1
ACTIVE INGREDIENT %
INERT INGREDIENTS %
TOTAL: 100.00 %
6A
7
THIS PRODUCT CONTAINS LBS OF PER GALLON
6B
KEEP OUT OF REACH OF CHILDREN
7A
7B
DANGER —POISON
7C
STATEMENT OF PRACTICAL TREATMENT
7D
IF SWALLOWED
IF INHALED
IF ON SKIN
IF IN EYES
SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS
7E
MFG BY
TOWN, STATE
2
5
ESTABLISHMENT NO
EPA REGISTRATION NO
4
NET CONTENTS
3
CROP
CROP
CROP
CROP
CROP
WARRANTY STATEMENT

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicators Certification.

It is a violation of Federal law to use this product in a manner inconsistent with its labeling

Appendix IV-1

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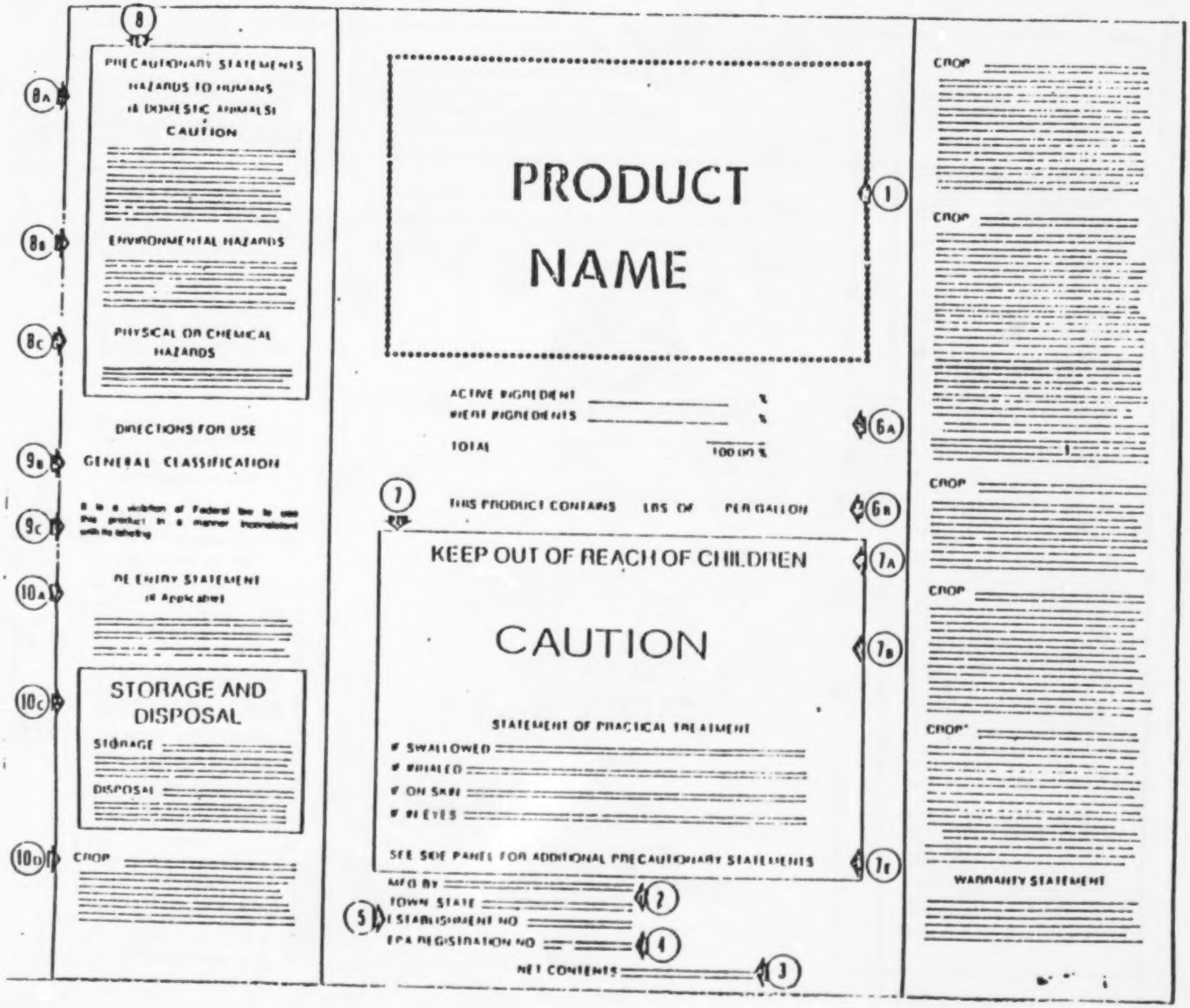
PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS (& DOMESTIC ANIMALS)
CAUTION
ENVIRONMENTAL HAZARDS
PHYSICAL OR CHEMICAL HAZARDS
DIRECTIONS FOR USE
GENERAL CLASSIFICATION
It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
RE-ENTRY STATEMENT (If Applicable)
STORAGE AND DISPOSAL
STORAGE
DISPOSAL
CROP
PRODUCT NAME
ACTIVE INGREDIENT %
INERT INGREDIENTS %
TOTAL 100.00 %
THIS PRODUCT CONTAINS LBS OF PER GALLON
KEEP OUT OF REACH OF CHILDREN
CAUTION
STATEMENT OF PRACTICAL TREATMENT
IF SWALLOWED
IF INHALED
IF ON SKIN
IF IN EYES
SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS
MFD BY
TOWN, STATE
ESTABLISHMENT NO
EPA REGISTRATION NO
NET CONTENTS
CROP
CROP
CROP
CROP
CROP
WARRANTY STATEMENT
1
2
3
4
5
6A
6B
7
7A
7B
7C
8
8A
8B
8C
9B
9C
10A
10C
10D

APPENDIX IV-2

LABELING REQUIREMENTS OF THE FIFRA, AS AMENDED (REFER TO THE SAMPLE LABELS FOLLOWING)

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
1	Product name	All products	Front panel	Center front panel	
2	Company name and address	All products	None	Bottom front panel or end of label text	If registrant is not the producer, must be qualified by "Packed for . . .," "Distributed by. . .," etc.
3	Net contents	All products	None	Bottom front panel or end of label text	May be in metric units in addition to U.S. units
4	EPA Est. No.	All products	None	Front panel	Must be in similar type size and run parallel to other type.
5	EPA Reg. No.	All products	None	Front panel, immediately before or following Reg. No.	May appear on the container instead of the label.
6A	Ingredients statement	All products	Front panel	Immediately following product name	Text must run parallel with other text on the panel.
6B	Pounds/gallon statement	Liquid products where dosage given as lbs. ai/unit area	Front panel	Directly below the main ingredients statement	
7	Front panel precautionary statements	All products	Front panel		All front panel precautionary statements must be grouped together, preferably blocked.
7A	Keep Out of Reach of Children (Child hazard warning)	All products	Front panel	Above signal word	Note type size requirements.
7B	Signal word	All products	Front panel	Immediately below child hazard warning	Note type size requirements.

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
7C	Skull & cross-bones and word POISON (in red)	All products which are Category I based on oral, dermal, or inhalation toxicity	Front panel	Both in close proximity to signal word	
7D	Statement of practical treatment	All products in Categories I, II, and III	Category I: Front panel unless referral statement is used. Others: Grouped with side panel precautionary statements.	Front panel for all.	
7E	Referral statement	All products where precautionary labeling appears on other than front panel.	Front panel		
8	Side/back panel precautionary statements	All products	None	Top or side of back panel preceding directions for use	Must be grouped under the headings in 8A, 8B, and 8C; preferably blocked.
8A	Hazards to humans and domestic animals	All products in Categories I, II, and III	None	Same as above	Must be preceded by appropriate signal word.
8B	Environmental hazards	All products	None	Same as above	Environmental hazards include bee caution where applicable.

ITEM	LABEL ELEMENT	APPLICABILITY OF REQUIREMENT	PLACEMENT ON LABEL		COMMENTS
			REQUIRED	PREFERRED	
8C	Physical or chemical hazards	All pressurized products, others with flash points under 150°F	None	Same as above	
9A	Restricted block	All restricted products	Top center of front panel	Preferably blocked	Includes a statement of the terms of restriction. The words "RESTRICTED USE PESTICIDE" must be same type size as signal word.
9C	Misuse statement	All products	Immediately following statement of classification or ahead of directions for use		
10A	Re-entry statement	All cholinesterase inhibitors	In the directions for use	Immediately after misuse statement	
10C	Storage and disposal block	All products	In the directions for use	Immediately before specific directions for use or at the end of directions for use	Must be set apart and clearly distinguishable from from other directions for use.
10D U.S.	Directions for use	All products	None	None	May be in metric as well as U.S. units

PRODUCT SPECIFIC DATA REPORT

EPA Registration No.________________Guidance Document for____________________________

Date__________________________________

Registration Guideline No.	Name of Test	Test not required for my product listed above (check below)	I am complying with data requirements by		(For EPA Use Only) Accession Numbers Assigned
			Citing MRID#	Submitting Data (Attached)	
§158.20 PRODUCT CHEMISTRY					
61-1	Identity of ingredients				
61-2	Statement of composition				
61-3	Discussion of formation of ingredients				
62-1	Preliminary analysis				
62-2	Certification of limits				
62-3	Analytical methods for enforcement limits				
63-2	Color				
63-3	Physical state				
63-4	Odor				
63-5	Melting point				
63-6	Boiling point				
63-7	Density, bulk-density, or specific gravity				
63-8	Solubility				
63-9	Vapor pressure				
63-10	Dissociation constant				
63-11	Octanol/water partition coefficient				
63-12	pH				
63-13	Stability				
63-14	Oxidizing/reducing reaction				
63-15	Flammability				
63-16	Explodability				
63-17	Storage stability				
63-18	Viscosity				
63-19	Miscibility				

63-20	Corrosion characteristics				
63-21	Dielectric breakdown voltage				
§158.135 TOXICOLOGY					
81-1	Acute oral LD-50, rat				
81-2	Acute dermal LD-50				
81-3	Acute inhalation, LC-50 rat				
81-4	Primary eye irritation, rabbit				
81-5	Primary dermal irritation				
81-6	Dermal sensitization				

Appendix IV-3

PHYSICAL-CHEMICAL HAZARDS

Criteria	Required Label Statement
I. Pressurized Containers	
A. Flashpoint at or below 20°F; or if there is a flashback at any valve opening.	Extremely flammable. Contents under pressure. Keep away from fire, sparks, and heated surfaces. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
B. Flashpoint above 20°F and not over 80°F; or if the flame extension is more than 18 inches long at a distance of 6 inches from the valve opening.	Flammable. Contents under pressure. Keep away from heat, sparks, and flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
C. ALL OTHER PRESSURIZED CONTAINERS	Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.
II. Non-Pressurized Containers	
A. Flashpoint at or below 20°F.	Extremely flammable. Keep away from fire, sparks, and heated surfaces.
B. Flashpoint above 20°F and over 80°F.	Flammable. Keep away from heat and open flame.
C. Flashpoint over 80°F and not over 150°F.	Do not use or store near heat and open flame.
D. Flashpoint above 150°F.	None required.

Appendix IV-5

STORAGE AND DISPOSAL INSTRUCTIONS FOR PESTICIDES

All products are required to bear specific label instructions about storage and disposal. Storage and disposal instructions must be grouped together in the directions for use portion of the label under the heading STORAGE AND DISPOSAL. Products intended solely for domestic use need not include the heading "STORAGE AND DISPOSAL." The STORAGE AND DISPOSAL heading must appear in the minimum type size listed below:

Size of label front panel in square inches	Required type size for the heading STORAGE AND DISPOSAL (all capitals)
10 and under	6 point
Above 10 to 15	8 point
Above 15 to 30	10 point
Over 30	12 point

Storage and disposal instructions must be set apart and clearly distinguishable from other directions for use. Blocking storage and disposal statements with a solid line is suggested as a means of increasing their prominence.

A. Storage Instructions:

All product labels are required to have appropriate storage instructions. Specific storage instructions are not prescribed. Each registrant must develop his own storage instructions, considering, when applicable, the following factors:

1. Conditions of storage that might alter the composition or usefulness of the pesticide. Examples could be temperature extremes, excessive moisture or humidity, heat, sunlight, friction, or contaminating substances or media.

2. Physical requirements of storage which might adversely affect the container of the product and its ability to continue to function properly. Requirements might include positioning of the container in storage, storage or damage due to stacking, penetration of moisture, and ability to withstand shock or friction.

3. Specifications for handling the pesticide container, including movement of container within the storage area, proper opening and closing procedures (particularly for opened containers), and measures to minimize exposure while opening or closing container.

4. Instructions on what to do if the container is damaged in any way, or if the pesticide is leaking or has been spilled, and precautions to minimize exposure if damage occurs.

5. General precautions concerning locked storage, storage in original container only, and separation of pesticides during storage to prevent cross-contamination of other pesticides, fertilizer, food, and feed.

6. General storage instructions for household products should emphasize storage in original container and placement in locked storage areas.

B. Pesticide Disposal Instructions:

The label of all products, except those intended solely for domestic use, must bear explicit instructions about pesticide disposal. The statements listed below contain the exact wording that must appear on the label of these products:

1. The labels of all products, except domestic use, must contain the statement, "Do not contaminate water, food, or feed by storage or disposal."

2. Except those products intended solely for domestic use, the labels of all products that contain active ingredients appearing on the "Acutely Hazardous" Commercial Pesticide Products List (RCRA "E" List) at the end of this appendix or are assigned to Toxicity Category I on the basis of oral or dermal toxicity, skin or eye irritation potential, or Toxicity Category I or II on the basis of acute inhalation toxicity must bear the following pesticide disposal statement:

   "Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance."

   The labels of all products, except those intended for domestic use, containing active or inert ingredients that appear on the "Toxic" Commercial Pesticide Products List (RCRA "F" List) at the end of this appendix or presently meet any of the criteria in Subpart C, 40 CFR 261 for a hazardous waste must bear the following pesticide disposal statement:

"Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance."

Labels for all other products, except those intended for domestic use, must bear the following pesticide disposal statement:

"Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility."

3. Products intended for domestic use only must bear the following disposal statement: "Securely wrap original container in several layers of newspaper and discard in trash."

C. Container Disposal Instructions

The label of each product must bear container disposal instructions appropriate to the type of container.

1. All products intended for domestic use must bear one of the following container disposal statements:

Container Type	Statement
Non-aerosol products (bottles, cans, jars)	Do not reuse container (bottle, can, jar). Rinse thoroughly before discarding in trash.
Non-aerosol products (bags)	Do not reuse bag. Discard bag in trash.
Aerosol products	Replace cap and discard containers in trash. Do not incinerate or puncture.

2. The labels for all other products must bear container disposal instructions, based on container type, listed below:

Container Type	Statement
Metal containers (non-aerosol)	Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.
Plastic containers	Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.
Glass containers	Triple rinse (or equivalent). Then dispose of in a sanitary landfill or by other approved state and local procedures.

Container Type	Statement
Fiber drums with liners	Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by state and local authorities. If drum is contaminated and cannot be reused[1], dispose of in the same manner.
Paper and plastic bags	Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.
Compressed gas cylinders	Return empty cylinder for reuse (or similar wording).

[1] Manufacturer may replace this phrase with one indicating whether and how fiber drum may be reused.

2. The labels for all other products must bear container disposal instructions, based on container type, listed on the first page of this Appendix.

Pesticides that are hazardous wastes under 40 CFR 261.33(e) and (f) when discarded.

"Acutely Hazardous" Commercial Pesticides (RCRA "E" List) Active Ingredients, (no inerts):

Acrolein
Aldicarb
Aldrin
Allyl alcohol
Aluminum phosphide
4-Aminopyridine
Arsenic acid
Arsenic pentoxide
Arsenic trioxide
Calcium cyanide
Carbon disulfide
p-Chloroaniline
Cyanides (soluble cyanide salts, not specified elsewere)
Cyanogen chloride
2-Cyclohexyl-4,6-dinitrophenol
Dieldrin
0,0-Diethyl S-[2-ethylthio)ethyl] phosphorodithioate
    (disulfoton, Di-Syston)
0,0-Diethyl 0-pyrazinyl phosphorothioate (Zinophos)
Dimethoate
0,0-Dimethyl 0-p-nitrophenyl phosphorothioate (methyl parathion)
4,6-Dinitro-o-cresol and salts
4,6-Dinitro-o-cyclohexylphenol
2,4 Dinitrophenol
Dinoseb
Endosulfan
Endothall
Endrin
Famphur
Fluoroacetamide
Heptachlor
Hexanethyl tetraphosphate
Hydrocyanic acid
Hydrogen cyanide
Methomyl
alpha-Naphthylthiourea (ANTU)
Nicotine and salts
Octamethylpyrophosphoramide (OMPA, schradan)
Parathion

"Acutely Hazardous" Commercial Pesticides (RCRA "E" List)
Active Ingredients continued:

Phenylmercuric acetate (PMA)
Phorate
Potassium cyanide
Propargyl alcohol
Sodium azide
Sodium cyanide
Sodium fluoroacetate
Strychnine and salts
0,0,0,0-Tetraethyl dithiopyrophosphate (sulfotepp)
Tetraethyl pyrophosphate
Thallium sulfate
Thiofanox
Toxaphene
Warfarin
Zinc phosphide

There are currently no inert ingredients for commercial pesticides on the "Acutely Hazardous" List (RCRA "E" List).

"Toxic" Commercial Pesticide Products (RCRA "F" List)
Active Ingredients:

Acetone
Acrylonitrile
Amitrole
Benzene
Bis(2-ethylhexyl)pthalate
Cacodylic acid
Carbon tetrachloride
Chloral (hydrate)
Chlordane (technical)
Chlorobenzene
4-Chloro-m-cresol
Chloroform
o-Chlorophenol
4-Chloro-o-toluidine hydrochloride
Creosote
Cresylic acid
Cyclohexane
Decachlorooctahydro-1,3,4-metheno-2H-cyclobuta[c,d]-pentalen-2-one
    (kepone, chlordecone)
1,2-Dibromo-3-chloropropane (DBCP)
Dibutyl phthalate
S-3,3-(Dichloroallyl diisopropylthiocarbamate (diallate, Avadex)
o-Dichlorobenzene
p-Dichlorobenzene
Dichlorodifluoromethane (Freón 12®)
3,5-Dichloro-N-(1,1-dimethyl-2-propynyl) benzamide (pronamide,Kerb)
Dichloro diphenyl dichloroethane (DDD)
Dichloro diphenyl trichloroethane (DDT)
Dichlorethyl ether
2,4-Dichlorophenoxyacetic, esters and salts (2,4-D)
1,2-Dichloropropane
1,3-Dichloropropane (Telone)
Dimethyl phthalate
Ethyl acetate
Ethyl 4,4'-dichlorobenzilate (chlorobenzilate)
Ethylene dibromide (EDB)
Ethylene dichloride
Ethylene oxide
Formaldehyde
Furfural
Hexachlorobenzene
Hexachlorocyclopentadiene
Hexachloroethane
Hydrofluoric acid

"Toxic" Commercial Pesticide Products (RCRA "F" List) Active Ingredients:

Isobutyl alcohol
Lead acetate
Lindane
Maleic hydrazide
Mercury
Methyl alcohol
Methyl bromide
Methyl chloride
2,2'-Methylenebis (3,4,6-trichlorophenol) (hexachlorophene)
Methylene chloride
Methyl ethyl ketone
4-Methyl-2-pentanone (methyl isobutyl ketone)
Naphthalene
Nitrobenzene
p-Nitrophenol
Pentachloroethane
Pentachloronitrobenzene (PCNB)
Pentaclorophenol
Phenol
Phosphorodithioic acid, 0,0-diethyl, methyl ester
Propylene dichloride
Pyridine
Resorcinol
Safrole
Selenium disulfide
Silvex
1,2,4,5-Tetrachlorobenzene
1,1,2,2-Tetrachloroethane
Tetrachloroethylene
2,3,4,6-Tetrachlorophenol
Thiram
Toluene
1,1,1-Trichloroethane
Trichloroethylene
Trichloromonofluoromethane (Freon 11®)
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)
Xylene

Appendix IV-5
(continued)

"Toxic" Commercial Pesticide Products (RCRA "F" List) Inert Ingredients:

Acetone
Acetonitrile
Acetophenone
Acrylic acid
Aniline
Benzene
Chlorobenzene
Chloroform
Cyclohexane
Cyclohexanone
Dichlorodifluoromethane (Freon 12®)
Diethyl phthalate
Dimethylamine
Dimethyl phthalate
1,4-Dioxane
Ethylene oxide
Formaldehyde
Formic acid
Isobutyl alcohol
Meleic anhydride
Methyl alcohol (methanol)
Methyl ethyl ketone
Methyl methacrylate
Naphthalene
Saccharin and salts
Thiourea
Toluene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichlorofluoromethane (Freon 11®)
Vinyl chloride
Xylene